CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, January 26, 1911.

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RAILWAYS.

(Denotes that this work is advertised in Engineering News.)*

ATLANTIC COAST LINE R. R.—This company, it is stated, will build a second track from Mount Holly, N. C., to Bonneau, about 20 miles. E. B. Pleasants, Wilmington, N. C., is Ch. Engr.

CANADIAN NORTHERN RY.—Within two months surveys will be completed for the main line from the Rocky Mountains to Port Mann, B. C. Several large contracts will be let during the coming year. It is reported that this company will construct a number of branch lines in Western Canada. T. Turnbull, Winnipeg, Man., is Asst. Ch. Engr.

CANADIAN PACIFIC RY.—The contract for the 38-mile stretch to Bethany, Ont., in the Victoria Harbor to Montreal line has been let to T. R. HINDS and D. A. DEEKS by the Toronto Construction Co., of Toronto. The Cardston branch will be extended this summer to a point near Pincher Creek, on the main line, touching Leavitt, Mountain View and Waterton Lakes. According to press reports it has been stated by William Whyte, Vice-Pres., Canadian Pacific Ry., that the company will build 500 miles of track in the West during the coming summer, including the completion of the double-tracking of the line between Winnipeg and Brandon. In addition to this there will be a good deal of double-tracking around Moose Jaw. The construction program includes a number of short lines, from 20 to 40 miles long, to connect newly-settled districts with the main lines.

CHATTANOOGA & ATLANTA R. R.—We are officially advised that this company will advertise for bids about April 15 for the construction of its new line connecting Chattanooga, Rome, Rochmart and Atlanta, 40 miles. The work is all new and heavy, 20% rock. Surveys are being made. C. H. Fish, Chattanooga, Tenn., is Ch. Engr. Noted Jan. 12.

CHICAGO, MILWAUKEE & PUGET SOUND RY.—It is reported that plans have been completed for a line of about 200 miles for this company. The route is by way of Kalispeel, from Clearwater to the international boundary. E. J. Pearson, Seattle, Wash., is Ch. Engr.

NEVADA-CALIFORNIA-OREGON RY.—An order for rails to extend the Nevada, California & Oregon Ry., from Alturas, Cal., to Pendleton, Ore., was placed recently. Construction contracts will shortly be let. The road is now 146 miles in length and when the extension is completed will be over 500 miles long. The extension will be a broad-gage line and later the entire road will be broad-gaged. George S. Oliver, Reno, Nev., is Ch. Engr.

NEW ORLEANS GREAT NORTHERN R. R.—Press advices state that this company will build an extension of its line from Columbia to Hattiesburg, about 30 miles. N. G. Pearsall, Bogalusa, La., is Ch. Engr.

NEW YORK, NEW HAVEN & HARTFORD R. R.—This company is planning to build 24 miles of track from Windsor to White River Junction; also ten miles between South Vernon and Brattleboro. It is also the intention of the company to complete the double track between Springfield, Mass., and White River Junction, Vt. Edward Gegel is Ch. Engr.

OKLAHOMA.—Press reports state that surveys are being made in Woods County near Alva, for the Buffalo & Northwestern, as a preliminary to building about 250 miles of road. This company is newly organized with a capital of $50,000. The office is at Buffalo, Harper County, Okla.

OREGON.—Engineers are at work for the Prineville & Eastern Co., on a section between Prineville, Ore., and a point on the Oregon Trunk Ry., a distance of about 20 miles. It is reported that grading work will begin soon. A. J. Noble, G. M. Cornett, T. M. Baldwin and W. A. Booth, all of Prineville, Ore., are interested.

OREGON SHORT LINE R. R.—Press advices are to the effect that this road will expend about $7,000,000 in Idaho this year as follows: Boise yard and terminals, platform extensions, etc., $7,066; track to be laid on grade from Caldwell to Homedale, 11.2 miles, estimate $114,645; extension from Richfield to High Prairie Summit, 67.2 miles, estimate $1,596,800; extension from Burley to Kelton Summit, traversing the Raft River project, 60.5 miles, estimate $2,045,000; track from Ashton to Briggs, 37.5 miles, estimate $994,957; extension from Buhl to Salmon River crossing, 8.6 miles, estimate $256,865; extension from Nissa, east toward Homedale, 26 miles, estimate $778,950. Wm. Ashton, Salt Lake City, is Ch. Engr.

PITTSBURG, SHAWMUT & NORTHERN R. R.—Engineers are completing surveys for a branch of this road from Nickelsons Run on the Allegheny River, seven miles south of Kittaning, Pa., to North Butler, Pa., to connect with the Bessemer & Lake Erie R. R. at that point. The Butler Branch will be 25 miles in length and cost $140,000 per mile, including the building of five tunnels in Summit Township. Construction work has been started on the two miles of track between Nickelsons Run and Dennys Mills. H. S. Wilgus, Angelica, N. Y., is Ch. Engr.

QUEBEC.—Surveys have been completed and work will shortly commence on the extension from Matane to Gaspe Basin for the Canada & Gulf Terminal. About 170 miles.

SALEM, FALLS CITY & WESTERN RY.—The 13-mile steam railway betwene Dallas and Black Rock, owned by this company, has been purchased, according to press reports, by James J. Hill and others identified with the Oregon Electric Ry. of Portland.

WABASH R. R.—Press reports state that interest has awakened and work resumed on the line from Zanesville to Marietta, Ohio, and then to Parkersburg, W. Va., about 85 miles. A. O. Cunningham, Title Guarantee Bldg., St. Louis, Mo., is Ch. Engr.

ELECTRIC RAILWAYS.

BRIDGEPORT, CONN.—Final surveys have been completed and the right-of-way is being purchased for a line from this place to Danbury, Conn., about 20 miles. A. William Sperry, of New Haven, is interested.

DANBURY, CONN.—Press reports state that the Danbury & Bethel St. Ry. Co. will petition the State Legislature for a charter to extend its Lake Kanosha Division to the New York State line. It is also considering plans for extending this line on to Brewster, N. Y. M. H. Griffing, Danbury, is Gen. Mgr.

AUBURN, N. Y.—A third-rail system of electrification of the Auburn-Ithaca Interurban Trolley Co. will be commenced in the spring, following permission just granted for the organization of the Ithaca-Auburn Power Co. The new company is to be capitalized at $50,000, with permission to buy the Remington power plant, which supplies the local trolley company and the lights for the city of Ithaca, which will be enlarged and used for interurban power purposes as well.

BROOKLYN, N. Y.—The Brooklyn and Jamaica Bay Ry. Co. have applied to the Public Service Commission for permission to lay a single track trolley line through Liberty and Montauk Aves.

BROOKLYN, N. Y.—The Public Service Commission has granted the application of the Coney Island & Brooklyn R. R. to sell $500,000 of notes. About $355,000 will be spent for improving five miles of line on Coney Island Ave.

BUFFALO, N. Y.—Authority has been granted the receivers of the Buffalo, Lockport & Rochester Railway Co. by the U. S. District Court to turn back the railroad to the possession of the company, the plan of reorganization adopted by the bondholders having been made effective. The road will now be operated by the Beebe Syndicate of Syracuse, in connection with the Rochester, Syracuse & Eastern Ry., and through cars will be run between Rochester and Buffalo instead of transferring passengers at Lockport, as at present.

ROCHESTER, N. Y.—The Rochester, Corning & Elmira Traction Co. contemplate the laying of about 90 miles of track between this city and Dansville, during this year, it is reported. W. G. Gray, 27 Church St., Rochester, N. Y., is Engr.

BLACKBURN, PA.—The Pittsburg, McKeesport & Westmoreland Ry. Co. will probably build from Blackburn to Hermine, about three miles. Manning Stires, of McKeesport, Pa., is Pres.

GETTYSBURG, PA.—The Washington, Westminster & Gettysburg R. R. Co. have filed with the Public Service Commission an application for power to build a road from Brentwood, Md., passing through Prince George's, Montgomery, Howard, Frederick and Carroll counties, to the Pennsylvania line, to Gettysburg.

MEDIA, PA.—It is reported that the Philadelphia & West Chester Traction Co. have made arrangements for an extension of its road into Media. It is said it is the intention to carry out the old plans of building an extension from Garrettford, parallel with the line of the Philadelphia & Delaware County Electric Ry. through Springfield and enter Media on State St. The charter of the proposed line was filed at Media about two years ago.

OXFORD, PA.—The Oxford, Cockranville & Parkersburg Electric Ry. Co. is contemplating a line of about 15 miles, connecting Oxford, Hayesville, Russellville, Edenton and Parkersburg. N. R. Rambo, Oxford, is Ch. Engr.

HAGERSTOWN, MD.—The Hagerstown & Clearspring Ry. Co., it is reported, proposes to build an electric line between Hagerstown and Clearspring, about twelve miles. Loren Downs, of New York, is Pres.; J. B. Kreps, Hagerstown, is Vice-Pres., and H. L. Kirby is Secy. and Treas.

RICHMOND, VA.—The City Council has passed an ordinance authorizing the contemplated extension of the Richmond & Henrico Ry., including a 1,250-ft. steel viaduct into Fulton. F. W. Scarborough is Consulting Engr.

BOOMER, W. VA.—A 4-mile railway will connect Montgomery, Harewood, Lonacre and Boomer, it is reported. M. J. Simms, Montgomery, W. Va., is interested.

WHEELING, W. VA.—The Pan-Handle Traction Co., press reports state, will build from Wheeling to Glennova, about three miles. Joseph Speidel, Wheeling, W. Va., is Pres.

WINSTON-SALEM, N. C.—The Carolina Traction Co. has decided to award contracts to build its contemplated interurban electric railway from Winston-Salem by way of Rural Hall, Lawsonville and Danbury, N. C., to Floyd, Va., a distance of about 102 miles. H. P. McKnight, of Southern Pines, is the promoter of this company, which proposes to issue $2,000,000 of bonds.

MACON, GA.—The Macon Ry. & Light Co. contemplate the extension of its line from Macon to Rivoli, about six miles. J. T. Nyhan, of this place, is Gen. Mgr.

NASHVILLE, TENN.—We are officially advised that the 30 miles of new line is being surveyed and right-of-way is being obtained, for the Nashville, Gallatin Interurban Ry. The company will do its own work, which will begin about May 1. H. H. Mayberry, Franklin, Tenn., is Pres. Noted Jan. 19.

TIFFIN, OHIO.—The Marion, Upper Sandusky & Toledo Co., represented by F. M. Chl, is pushing the scheme of building an interurban railway from Marion to this city, about 40 miles.

MT. VERNON, IND.—It is reported that plans have been made by the Evansville Ry. Co., to build an extension between Mt. Vernon and New Harmony, about 15 miles. W. A. Carson, Evansville, Gen. Mgr.

NEW CASTLE, IND.—Press reports are to the effect that the Indianapolis, New Castle & Toledo Electric Ry. Co. will build from New Castle to Muncie in the spring. It is also reported the right-of-way has been secured. P. H. White, 30 Union Trust Bldg., Indianapolis, is Ch. Engr.

GRAND LEDGE, MICH.—Press reports state that bids will be received in the spring for rails and ties by W. H. Zimmerman, 164 Dearborn St., Chicago, Ill., for a line about 15 miles for the Lansing & Grand Ledge R. R. Co.

MOLINE, ILL.—The Rock River Traction Co., it is reported, makes the statement through its President, Hugh W. Cole, Geneseo, Ill., Gen. Mgr., that the road between Moline and Geneseo will be built during the present year. It is possible that it may ultimately be extended to Princeton, where it will connect with the line of the Illinois Traction Co., or the McKinley system. The right to cross the Rock River, either at Cleveland or Colona, has been obtained from the government.

WHITEWATER, WIS.—We are officially advised that the Badger Railway & Light Co. will do its own work on the line between Whitewater and Lake Geneva, 22 miles. Surveys have been made and right-of-way obtained. The work will be light. G. Prickhard, 711 Majestic Bldg., Milwaukee, Wis., is Ch. Engr. Noted Jan. 5.

FOREST CITY, IOWA.—A railway is being considered by the Forest City & Mason City Ry. Co. to be built between this city and Mason City, by way of Fertile. C. N. Christoferson, Forest City, Iowa, is interested.

IOWA CITY, IOWA.—The Cedar Rapids & Iowa City Ry. & Lt. Co. is planning to expend $80,000 during the coming year. A sub-station in Iowa City and one in North Liberty to take the place of the Coralville sub-station, it is reported, will be constructed. Much blasting work will be done. Wm. G. Dows, Cedar Rapids, Iowa, is Pres. and Mgr.

MOOREHEAD, MINN.—The Fargo & Moorehead St. Ry. Co. contemplate an extension to Dilworth, Minn., about three miles. C. P. Brown, Fargo, N. Dak., is Mgr.

VIRGINIA, MINN.—Preliminary work is reported to be finished and it is supposed that construction work will soon begin on a line connecting Virginia, Eveleth, Gilbert and Hibbing, about 35 miles. W. M. Prindle, Duluth, is interested.

WINONA, MINN.—The St. Paul Ry. Promotion Co. is considering a plan to build from Winona to La Crosse. W. L. Sonntag, 810 Metropolitan Bldg., St. Paul, is Gen. Mgr.

OMAHA, NEB.—The plan of the promoters of a new company, the Omaha & Western Iowa Co., contemplating an interurban electric railway between Omaha and Sioux City, it is said, is to use the tracks of the service company into Sioux City. The new line will be entirely independent of the Sioux City lines and also of the Omaha company. In leaving Omaha the proposed line will utilize the tracks of the Omaha & Council Bluffs St. Ry. Co. to the outskirts of Council Bluffs. It will probably pass through Pottawattamie, Harrison, Monona and Woodbury. The incorporators are C. E. Brown, M. E. Gallitan, G. D. McDonough and D. J. Avery, of Chicago, and James S. Sebree, Pierre, S. Dak.

HAMILTON, MONT.—Articles of incorporation have been filed for the Missoula & Hamilton Ry. Co., the incorporators of which are H. M. Sloan and R. A. O'Harra, of this city, and F. I. Bennett, Ira Cobe and L. A. Busby, of Chicago, Ill., all being connected with the Bitter Root Valley Irrigation Co. It is thought a line will be built between Hamilton and Missoula, touching Bitter Root, Stevensville and Corvallis. An electric light and power, and telegraph and telephone system will also be built. Of the capital stock of $500,000, $100,000 has been subscribed.

FORT SMITH, ARK.—The Fort Smith Light & Traction Co., it is reported, will construct a line from Van Buren to this place, about four miles. L. R. Robertson, Fort Smith, is Ch. Engr.

HOUSTON, TEX.—The Galveston-Houston Electric Co. will probably let contracts for grading from Brays Bayou to Houston, about 20 miles. Stone & Webster, 147 Milk St., Boston, Mass., are Mgrs.

BRITTON, OKLA.—It is reported that the Oklahoma Ry. Co. will construct during the coming year two extensions. One from Britton to Edmond, about six miles, and one from Yukon to El Reno, about twelve miles. W. A. Haller, Oklahoma City, is Gen. Mgr. of Constr.

OKLAHOMA CITY, OKLA.—The Oklahoma Short Line is incorporated to build 175 miles of railway between this city and Joplin, Mo. It is also reported that Shawnee, Okla., and Denison, Tex., will be connected by a line, about 125 miles. P. Paddock, this city; S.

Improvements Made and Contemplated in New Orleans.

By W. J. HARDEE, City Engineer.

From any and every point of view the past few years have shown marked advancement for the City of New Orleans along all lines, but particularly has this advancement been noticeable along engineering lines and in works of public improvement. Many millions of dollars have been expended in street paving, installing subsurface drainage, sewerage and water systems, and in building schools, engine houses and other public buildings, as well as in the erection of a number of miles of modern steel sheds along the river front, and in the general improvement of the publicly-owned wharves and terminal facilities. Large extensions have been made in the various railroad terminals, and building operations in general show marked progress. To just what extent this progress may be expected to continue into the coming year cannot be foreseen, but present conditions indicate considerable activity along all lines. Contracts have already been made for approximately eight miles of modern street pavements, for four school buildings and three engine houses, while provision has been made for other public buildings aggregating in cost approximately $680,000. Additional appropriations for works of this kind will probably be made from time to time during the coming year. During the past year, considerable attention has been devoted to the development of low sections in the rear of the built-up portion of the city, and large amounts have been invested in the reclamation of these marsh lands. This work will undoubtedly be continued and these outlying residential districts will be further developed. Conditions also indicate some activity in large building construction, but it is impossible at this time to furnish any definite information along these lines. The city is now engaged in the improvement of the West End Lake Shore Park, which is located on the shore of Lake Pontchartrain, and it is expected that further improvements of this character will follow the completion of this resort.

V. Sanders, Albemarle, S. C., and T. E. Armentrout, Kirkwood, Mo., are the incorporators.

WHITE SALMON, WASH.—Press reports state that White Salmon, Bingen, Bristol, Snowden, Timber Valley and Glenwood will be connected by a line to be built by the Mt. Adams Ry. Co. Work, it is said, will begin on this line of about 40 miles in the spring. W. W. Swan, Pres.; T. F. Shepler, Secy., and R. Field, Treas., all of White Salmon.

PORTLAND, ORE.—Subway plans are outlined in this city. The Portland Subway Co., newly incorporated, is represented here by A. K. Bentley, L. Y. Keady, A. E. Hammond, A. Clark, and, it is reported, will apply for a franchise to construct a tube under the Willamette River and through a sub-surface loop about one mile long on the west side. The company's plans also include the building of 150 miles of surface track on the west side. The above representatives are agents for Eastern and European capitalists whom, it is believed, will spend $20,000,000 for this project.

HAYWARDS, CAL.—Isaac B. Parsons has made application for a 50-year franchise granting him power to construct a street railway through this town, beginning near the Western Pacific Depot, extending northerly through Castro Valley.

LOS ANGELES, CAL.—Announcement has been made that the Los Angeles Ry. Co. will extend its lines into Brooklyn Heights. The line terminating at Brooklyn Ave. and Eschandia St., will be extended on Wabash Ave. to the city limits. Another line will be built on Evergreen Ave., from Brooklyn Ave. to Wabash Ave. G. J. Kuhrts, Los Angeles, Cal., is Ch. Engr.

LOS ANGELES, CAL.—Sealed bids will be received by the Board of Supervisors until 2 p. m., Feb. 13, for an electric railway franchise in this town. H. J. Lelande is City Clerk.

SANTA BARBARA, CAL.—W. I. Breckenridge, Gen. Mgr. of the Southern California Edison Co., has just completed an examination of the electric street car system here and announces that the old system will either be abandoned and a new system constructed or the old system will be rebuilt at a cost of $250,000.

THREE RIVERS, CAL.—Press reports are to the effect that the Visalia Electric R. R. Co. will build a line from here to Lemon Cove, about 10 miles. The Gen. Mgr. and Ch. Engr. is James H. Crosett, Exeter, Cal.

FORT WILLIAMS, ONT.—It is reported that the municipal electrical street railway system expects to build an extension and make other improvements which will cost about $67,000.

HAMILTON, ONT.—Plans for the electrification of the Hamilton and Waterford branch of the Toronto, Hamilton & Buffalo Ry. are being completed by Ch. Engr. Latham of the company.

MILTON, ONT.—According to press reports the Toronto Suburban Ry. Co. has applied for permission to extend its line from some point on its present authorized Guelph line, to some point in or near Milton. This company also asks permission to extend its line from Guelph to Berlin, Preston, Hespeler and Galt and to Hamilton. In connection with these extensions the capital stock of the railway will be increased. Allan H. Royce, Toronto, Ont., Pres.

OTTAWA, ONT.—The Ottawa & Smith's Falls & Kingston Electric Ry. will apply for power to build from Ottawa to Kingston.

VANCOUVER, B. C.—According to press reports the British Columbia Electric Ry. will build a line from Sapperton to Vancouver, by way of Hastings and Grandview. Another line will be built between Vancouver and Eburne. The Westminster line will be relocated and double tracked in places.

LIGHT AND POWER PLANTS.

*(*Denotes that this work is advertised in Engineering News.)*

PITTSFIELD, ME.—The citizens of this place are considering the question of lighting the town with electricity. The Pittsfield Light & Power Co. has been asked to extend its transmission lines. C. F. Gardiner is Mgr.

HAVERHILL, MASS.—Bids will be received until 3 p. m., Feb. 15, by the Supervising Architect, Washington, for a conduit and wiring system and the extension of present gas piping system in the United States post-office at Haverhill, Mass. Drawings and specification may be had at this office or at the office of the custodian at Haverhill, Mass., at the discretion of the supervising architect. James Knox Taylor is Superv. Arch.

GREENWICH, CONN.—According to press reports the Housatonic Electric Lighting Co. has appropriated $100,000 for the construction of a gas-producing and distributing plant here.

PUTNAM, CONN.—The State Legislature has been petitioned by the Putnam Light & Power Co. to extend its system in Woodstock for the purpose of furnishing electric service for motors and lamps.

EAST QUOGUE, N. Y.—The petition to grant a lighting district has been granted. A contract will be made with the Suffolk Heat & Lighting Co., of Southampton, for 40 electric lights at $18 per year for a period of five years with an option of five years additional service at the same price.

HOMER CITY, PA.—An electric light plant will, in all probability, be installed here. A company with this end in view has already been formed by J. A. Stokes, of the Blairesville Machine Works, and C. A. Simons, Supt. of the Columbia Plate Glass Co., and W. P. Graff, Cashier of the First National Bank.

NEWTOWN, PA.—Bids will be received until Jan. 31 by Rodolph Hauler, Chn. Com. on Lighting, for lighting the public highways of the Borough.

LANSFORD, PA.—It is reported that the Lehigh Coal & Navigation Co. will have the GENERAL ELECTRIC CO. erect a large power-house to supply electric service to New York and Philadelphia.

PHILADELPHIA, PA.—See item under Bridges.

BALTIMORE, MD.—Plans are being completed by Supt. of Lamps and Lighting for a system of artistic lighting along Light St., from Lee to Baltimore Sts.

OWINGS MILLS, MD.—Bids will be received until Feb. 1 by Frank W. Keating, Supt. of Maryland Asylum and Training School for Feeble Minded for electric equipment, heating power and plumbing in connection with buildings to be erected. Plans and specifications were prepared by Ellicott & Emmart.

THURMONT, MD.—The Town Commissioners have purchased the electric light and power plant from Citizens' Electric Light & Power Co. for $19,846, and will operate. New machinery will be installed.

ATLANTA, GA.—Bids will be received until 10 a. m., Feb. 14, by the Superintendent of Prisons, Washington, D. C., for furnishing and delivering at the United States penitentiary, Atlanta, Ga., electric light and power installation in the hospital building. Specifications, together with further information, may be had upon application at the office of R. V. Ladow, Supt. of Prisons, Washington, D. C.

BILOXI, MISS.—The C. H. Evans Engineering Co., 145 Van Buren St., Chicago, has plans in the course of progress for a 7-mile wrought-iron pipe extension of gas main for the Gulf Coast Gas Co.

OPELOUSAS, LA.—Plans for improvements and extensions to the municipal electric light plant are being considered. Armas Durio is Supt.

NASHVILLE, TENN.—We are officially advised that the report that the Aluminum Co. of America, Pittsburg, Pa., has under way a $5,000,000 power development on the Little Tennessee River, near here, is erroneous. The company is, however, negotiating with a concern which owns some water power rights on the Little Tennessee and is having some rough preliminary surveys made to determine their value. The most favorable outcome possible of these negotiations and surveys would be that in, perhaps, a year or two years the company would undertake to develop a small water power.

LOUISVILLE, KY.—The stockholders of the Kentucky Electric Co. have approved plans for improvements and extensions to the plant and properties of the company. There will be constructed a new generating station on Water St., between Third Ave. and Second St. R. E. Hughes is Pres.

BLUFFTON, IND.—The HARRISBURG FOUNDRY & MACHINE CO. has been awarded the contract for a 450-HP. engine for the municipal electric-light plant. The generator and electrical equipment will be supplied by the FORT WAYNE ELECTRIC WORKS, Fort Wayne, Ind.

INDIANAPOLIS, IND.—The State Board of Agriculture is asking for legislation for an appropriation of $15,000 to install a heating plant in the pavilion at the State fair grounds.

KNIGHTSVILLE, IND.—The Town Board is considering plans for the installation of an electric light system. Electricity to operate the system will probably be supplied by the Terre Haute, Indianapolis & Eastern Traction Co. Joseph A. McGowan is Secy. and Treas.

LEBANON, IND.—The Citizens' Electric Light Co. will use the proceeds of its capital stock for improvements and extensions to its system. Charles C. McReynolds is Pres.; C. E. Layton is Secy.

SAYBROOK, ILL.—R. C. Cooper is reported to be contemplating the installation of a new plant to supply electricity in Saybrook, Arrowsmith and Gibson City.

BARABOO, WIS.—James Dickie, George McArthur, Sr., and George McArthur, Jr., have organized the Merchants' Power & Light Co., to install a water power plant for the purpose of generating dry current.

MILWAUKEE, WIS.—The Finance Committee of the Common Council has made provision for the issue of bonds for $300,000 for the proposed municipal electric light and power plant, this sum forming the initial appropriation for the purpose. Harry E. Briggs is Comr. Pub. Wks.

MILWAUKEE, WIS.—The Milwaukee County Boad of Supervisors has rejected all bids for electric lighting on the new $1,500,000 Grand Ave. viaduct. Vaughan & Meyer, Consulting Elec. Engrs., 909 Majestic Bldg., Milwaukee, have been commissioned to submit a lighting plan.

FAIRFIELD, IOWA.—See item under Water Supply—Irrigation.

CEDAR RAPIDS, IOWA.—Plans are being prepared by the Cedar Rapids & Iowa City Ry. & Light Co. for the construction of two new power-houses during the coming year, one to be located at Iowa City and one at North Liberty.

IOWA CITY, IOWA.—We are officially advised that the city is contemplating the installation of another boiler and a dynamo at the municipal water plant and doing its own street lighting. In such an event, the city will probably buy poles and wire for new lines unless the old lines can be purchased at a fair valuation. The City Council is seeking estimates along this line of improvement.

MINNEAPOLIS, MINN.—The Minneapolis General Electric Co. has secured water power sites at Clearwater, Otsego and Monticello. Plants will be built at each site. The company will expend $1,500,000 this year for sub-stations, storage batteries, land sites and extensions to the underground system.

MINNEAPOLIS, MINN.—The Minneapolis General Electric Co. will erect a new station of concrete and steel to cost about $750,000. It is stated that the company has outlined plans for a series of new substations to take care of each part of the city. Stone & Webster Corporation, 147 Milk St., Boston, are Engrs.

ST. PAUL, MINN.—Col. J. H. Davidson, of the State Waterways Commission, has recommended the construction of a 6,000-HP. steam power plant as an auxiliary to the water power at the proposed high dam.

LEAVENWORTH, KAN.—Bids will be received until 10 a. m., Feb. 16, by R. V. Ladow, Supt. of Prisons, Dept. of Justice, Washington, D. C., for furnishing and delivering at the U. S. penitentiary here electric light and power installation in the hospital building.

SPRING HILL, KAN.—The citizens have voted in favor of issuing $6,000 bonds for the construction of a municipal electric lighting plant.

FREMONT, NEB.—The Council will install an electrolier lighting system in the business section and The Fremont Gas & Electric Light Co. will make extensions to its system this year.

GRAND ISLAND, NEB.—See item under Water Supply—Irrigation.

SPENCER, NEB.—W. J. Woods is planning to install an electric light plant, including two 35-HP. gas engines and two 3,000-HP. dynamos. Estimated cost, $8,000.

SHERIDAN, WYO.—Bids will be received until January *27 by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for furnishing and installing light fixtures in the U. S. public building at Sheridan.

BRYAN, TEX.—G. W. Hardy and associates, who compose the Bryan Gas & Oil Co., have under consideration the project of piping natural gas from the field that they are developing near here to Houston, a distance of about 100 miles. It is stated that as soon as sufficient supply of gas is developed for the purpose the company will make application to the municipal authorities of Houston for a franchise for laying a distributing system in that city. Others interested in the company are: D. C. Giddings, of Brenham, Tex.; J. S. Savage, of Charleston, W. Va.; H. E. Bell and M. A. Currie, of Bryan.

EL PASO, TEX.—The El Paso Gas & Electric Co. will install a new gas tank of 500,000 cu. ft. storage capacity here. It will also make large extensions to its gas mains during the present year.

FORT BLISS, TEX.—The War Department, Washington, D. C., will install an electric lighting system at this place to cost about $20,000.

FORT WORTH, TEX.—The citizens on Jan. 12 voted to issue $40,000 of bonds to extend the lighting system.

MARFA, TEX.—The Marfa Electric Light & Ice Co. will install a complete gas-engine equipment at its plant here.

PLAINVIEW, TEX.—H. E. Powell, of Springfield, Ill., and associates, will install a gas plant here. Application has been made to the City Council for a franchise for the proposed distributing system.

PROVIDENT CITY, TEX.—See item under Manufacturing Plants.

TEMPLE TEX.—The Gulf, Colorado & Santa Fe R. R., in addition to the $42,000 which was appropriated for the purchase of additional machinery for its shops at this place, will install a steam heating plant here at a cost of $18,000, and also contemplates installing an electric light and power plant.

CARBONDALE, COLO.—The Board of Trustees has granted to the Aspen Light Co. a franchise to supply electricity for lamps and motors here for 20 years. The company agrees to supply electricity at 20 cts. per KW.-hr., with a minimum charge of $2. A 24-hr. service will be established.

FOWLER, COLO.—The City Council has granted to the Pueblo & Suburban Traction & Lighting Co., Pueblo, Colo., a 10-year franchise to supply electricity for lamps and motors here. Transmission lines will be extended to Fowler at once.

CLARKS FORK, IDAHO.—The MacGillis & Gibbs Lumber Co., Milwaukee, Wis., and Spokane, Wash., it is reported, will erect a large timber-cutting plant. The plant will be equipped for electrical operation.

MOUNTAIN HOME, IDAHO.—The Thousand Springs Power Co. has decided to construct a power plant and erect a transmission line five miles in length along the Snake River to below Brown's flats, where a pumping plant will be installed. The plans call for the irrigation of several thousand acres of land in Southern Idaho. Estimated cost, $300,000. Address Dr. R. G. Roberts, Mountain Home.

BENSON, ARIZ.—See item under Water Supply—Irrigation.

LAKEVIEW, ORE.—See item under Water Supply—Irrigation.

MEDFORD, ORE.—The Rogue River Electric Co. is preparing for the construction of a new plant at Prospect, on Rogue River, next spring. The present plant located at Gold Bay, ten miles from Medford, is inadequate to supply the demands of the cities in the valley. High-tension transmission lines, carrying 66,000 volts, will be erected from the proposed plant to the valley cities, including Grant's Pass, Medford and Ashland.

ALAMEDA, CAL.—The City Council is considering the construction of a new power station. Estimated cost of the building, $50,000.

EL CENTRO, CAL.—W. F. Holt and associates are planning for the construction of a large steam-driven electric generating plant to supply electricity for the entire Imperial Valley. Estimated cost, $250,000.

JACKSON, CAL.—John L. Henry has been granted a 50-year franchise by the Board of Supervisors to erect and operate an electric system. It is unders[illegible] that it is proposed to supply electric[illegible] the town of Plymouth.

LOS ANGELES, CAL.—S[illegible]em under Miscellaneous Contracts: R[illegible]

PLACERVILLE, CAL.—Th[illegible] G. Patton has filed notice of approp[illegible] of 5,000 ins. of water in Silver Lake [illegible] the County Recorder. The water will [illegible]verted by means of a dam, ditch and [illegible] for domestic, mining, irrigation [illegible] for generating electricity.

UKIAH, CAL.—The Snow M[illegible]in Water & Power Co. is arranging [illegible] extensive improvements and extensions [illegible] system. W. S. Graham is Gen. Supt. [illegible]ah.

MONTREAL, QUE.—The Sh[illegible]an Water & Power Co. has purchased a[illegible] of land in Maisonneuve, Montreal, [illegible]nnection with the enlargement of its [illegible]inal station. J. E. Alfred is Pres.

VALLEYFIELD, QUE.—The [illegible]treal Cotton Co. has purchased the [illegible] of the Valleyfield Electric Co. for $8[illegible] it is reported.

PORT HOPE, ONT.—The ra[illegible]ers have passed a by-law granting a [illegible]ar franchise to the Seymour Electr[illegible]ower Co. J. G. G. Kerry, Toronto, Ont., [illegible]res.

PRESCOTT, ONT.—The Alum[illegible] Co. of America, Pittsburg, Pa., has [illegible]ased, it is stated, 3,500 acres of la[illegible] including Bernhart's Island, in the S[illegible] Lawrence River, below here. It is prop[illegible] to construct a plant to develop 300,0[illegible] HP.

WINNIPEG, MAN.—The Cons[illegible]g Board of Power Engineers have reco[illegible]nded to the Board of Control an expendi[illegible] of $55,000 this season for cable cond[illegible] to distribute power along Main St. [illegible] Portage Ave.

REGINA, SASK.—Bids will be r[illegible]ved until Jan. 31 by A. J. McPherson, [illegible] Comr., for furnishing and installing the [illegible]llowing: A 1,500-KW. steam turbine gener[illegible]ng unit; 500-KW. d. c. generating unit; two 500-HP. boilers, economizer; hand-power traveling crane, and a coal and ash conveyor.

MEXICO CITY, MEX.—A Canadian syndicate, headed by William Mackenzie, of Toronto, Ont., Pres. Canadian Northern Ry. Co., which already owns the extensive electric railway and lighting system in Monterey, Mex., has acquired the concession that was granted by the Government some time ago for the construction of a large dam across the Balsas River and the installation of a large hydro-electric plant in the state of Guerrero. It is announced that the contract for the construction of the dam has been let and that the structure will cost approximately $3,000,000 gold. The dam will be 150 ft. high and will be located in the canyon of the river near the end of the Cuernavaca, Mexico & Pacific division of the National Rys. of Mexico. The proposed hydro-electric plant will have an initial capacity of 30,000 HP. This electrical energy will be transmitted to Chilpancingo, capital of the state of Guerrero, and to a number of mining districts of that region, including the ancient town and district of Taxco. Contracts for the proposed power to be generated by the plant are already being made by representatives of the syndicate.

MONTEREY, MEX.—Bids will be received by Lewis Lukes, Vice-Pres. and Gen. Mgr., Monterey Ry., Light & Power Co., Ltd., P. O. Box 58, until March 1, for the erection of a gas plant for a modern city of 85,000 inhabitants, with first-class railroad facilities. Separate bids will also be received for laying gas mains and curb connections. Plans and specifications will be furnished upon application.

PACHUCA, MEX.—Leoncio Hernandez will install a hydro-electric plant near here. He recently obtained a concession from the Government for the purpose.

BRIDGES.

*(*Denotes that this work is advertised in Engineering News.)*

FULTON, N. Y.—The New York Central R. R. Co. is considering the construction of a bridge across the river at Pratt St. G. W. Kittridge is Ch. Engr., New York.

NEW YORK, N. Y.—The contract has been awarded by Kingsley L. Martin, Comr. of Bridges, to CHARLES MEADS & CO., 299 Broadway, New York, for constructing elevators, stairs, drainage, ornamental and electrical work for the anchor piers of the Queensboro Bridge over the East River, between Manhattan and Queens Boroughs, at $57,300. Bids were opened on Jan. 10. List of bidders noted on Jan. 19.

The Department of Bridges has prepared preliminary sketches of the proposed bridge, the Bronx terminus of which will be near the Morris Heights station on the Putnam Division of the New York Central R. R. Co. On the Manhattan side the bridge will pass over the Speedway and descend on a curve to Dyckman St. It will be about midway between Washington Bridge and Fordham Heights Bridge at 207th St. The cost of the improvement is estimated at $1,200,000. Kingsley L. Martin is Comr. Bridges.

PATCHOGUE, (L. I.), N. Y.—The Public Service Commission, it is reported, has ordered the Long Island R. R. Co. to construct an overhead steel bridge across its tracks across Ronkonkoma Ave., with a clearing of 21 ft. Plans will be submitted to the town authorities before March 1. J. R. Savage is Ch. Engr., Jamaica, N. Y. George L. Chilchester is Town Clk.

SOUTHAMPTON, (L. I.), N. Y.—The Canton Bridge Co., Canton, Ohio, on Jan. 17 submitted the only bid for the construction of the Quogue bridge at $8,871.

TRENTON, N. J.—The Board of Chosen Freeholders has instructed the County Engineer to prepare plans for the construction of two new bridges, one at South Stockton St., and the other on the River Road at Titusville.

PHILADELPHIA, PA.—Bids will be received by George R. Stearns, Dir. Pub. Wks., until noon, Jan. 31, for reconstructing the bridge in the line of 47th St. over the West Chester & Philadelphia R. R. Appropriation available, $52,155.

PITTSBURG, PA.—The Common Council on Jan. 9 passed an ordinance providing for the construction of the Point Bridge, and the construction of a bridge across Atherton Ave. over the Pittsburg Junction R. R. Estimated cost, $850,000 and $85,000, respectively. N. S. Sprague is City Engr.

READING, PA.—B. H. Davis, 1 Madison Ave., New York, has been engaged as consulting engineer by the Berks County Commissioners to assist the County Engineer in supervising the plans and construction of a cement and steel bridge to be erected over the Schuylkill River at the foot of Penn St. It will take the place of the present bridge, which has been condemned. Estimated cost, $350,000. Noted on Jan. 12.

SCRANTON, PA.—We are officially advised that bids will be opened some time in February for the construction of a bridge to be built jointly by this city and the American R. Co., Witherspoon Bldg., Philadelphia, Pa. Estimated cost, $200,000. M. Ward Easby, Crozer Bldg., Philadelphia, is Engr. Noted on Dec. 8.

WASHINGTON, D. C.—Bids were received as follows on Jan. 23 by the Commisioners of the District of Columbia, for strengthening the Calvert St. bridge: Snare & Triest Co., 143 Liberty St., New York (proposition A) $20,550, (B1) $16,200, (B2) $4,780; Penn Bridge Co., Beaver Falls, Pa., (A) $19,789, (B1) $16,280, (B2) $3,409; Baltimore Bridge Co., Baltimore, Md., (A) $23,250, (B1) $19,-280, (B2) $3,870; Pierson & Goodrich, Inc., 30 West St., New York, (A) $28,890, (B1) $21,940, (B2) $6,950; Oscar Daniels, 38 Park Row, New York, (A) $22,514, (B1) $18,000, (B2) $4,900; McClintick-Marshall Construction Co., Pottstown, Pa., (A) $23,400, (B1) $17,875, (B2) $6,450.

MATOACA, VA.—The town is considering the erection of a bridge across the Appomattox River. The structure will be of steel. Estimated cost, $10,000.

RICHMOND, VA.—The Richmond & Henrico Ry. Co. is having plans prepared by F. W. Scarborough, Richmond, for the construction of a steel viaduct 1,250 ft. long connecting National Cemetery Road and Fulton. Estimated cost, $150,000.

BENWOOD, W. VA.—The City Council has instructed Clem Smith, City Engr., to prepare estimates of the cost of the construction of a bridge from Kentucky Heights across the Baltimore & Ohio R. R. tracks at Sixth St.

ATLANTA, GA.—The Mayor has recommended the construction of the following bridges: A viaduct across the railroad tracks at or near the point that Bellwood Ave. crosses before its intersection with Marietta St.; the extension of West Alabama St., by building a viaduct over the railroad tracks and intersecting Rhodes St. R. M. Clayton is City Engr.

JACKSONVILLE, FLA.—Bids will be received until Jan. 30 by P. A. Dignan, Chn. Bd. Pub. Wks., for furnishing material and constructing a bridge on East Bay St., over Hogans Creek.

COLUMBUS, ALA.—The West Columbus Land Co., Z. Hagerdon, Pres., West Point, Ga., will construct a steel bridge connecting West Columbus with Columbus. Estimated cost, $60,000. T. W. Bates is Secy., Columbus, Ga.

MERIDIAN, MISS.—Bids will be received until 2 p. m., Feb. 6, by W. R. Pistole, County Clk., Meridian, for the construction of a wooden bridge across Opossum Creek.

HOUMA, LA.—Terrebonne Parish, J. C. Dupont, Pres. Police Jury, will receive bids, with plans, until 2 p. m., Feb. 7, for the construction of a bridge across Bayou Terrebonne, span opening, 50 ft., total length, 132 ft. and 14 ft. wide, creosoted piling, 12 × 12, height from water, 10 ft. The contractors must get survey and permit from the Secretary of War, Washington, D. C.

NEW ORLEANS, LA.—The city will construct a bridge across the drainage canal near lake Pontchartrain; W. J. Hardee is City Engr.

AKRON, OHIO.—Bids will be received until Jan. 30 by the County Commissioners, Akron, for the construction of the superstructure of the Haulk Bridge, near Clinton, Franklin Township. Charles L. Wirth is Clk.

CINCINNATI, OHIO.—The Council on Jan. 16 granted permission to the Cincinnati Traction Co. to construct a new bridge over Eastern Ave., near St. Andrews St. F. H. Shipley is City Engr.

COLUMBUS, OHIO.—The city has awarded the contract for the construction of pavement on the Mound St. viaduct to A. G. PUGH, the lowest bidder, at $18,000. There were seven bidders for the work.

COLUMBUS, OHIO.—The County Commissioners of Franklin County have decided not to build a temporary structure in the place of the bridge on the Wilson Pike, washed away, and have instructed the County Engineer to prepare plans and specifications for a new bridge. Estimated cost, $25,000.

DAYTON, OHIO.—The City Council is considering the construction of a bridge over Wolff Creek, connecting the West Side and Dayton View at the Orth plot. Estimated cost, $15,000. C. J. Cellarius is City Engr.

JEFFERSON, OHIO.—We are officially advised that bids were received by the Board of Commissioners of Ashtabula County, on Jan. 16, for furnishing all the material and erection of a riveted steel Pratt truss bridge over Grand River, on the East and West Center Road, in Orwell Township, per Report No. 154. J. S. Matson is County Surv. The RIVERSIDE BRIDGE CO., Martins Ferry, Ohio, secured the contract at $4,820. The estimated cost was $5,816.

NEW PHILADELPHIA, OHIO.—The Board of County Commissioners of Tuscarawas County has instructed the County Surveyor to prepare plans and specifications for the construction of a steel riveted bridge, 305 × 18 ft., at Boliver.

SPRINGFIELD, OHIO.—Bids will be received by the County Commissioners of Clark County, Springfield, and the County Commissioners of Champaign County, at Springfield, until Feb. 28, for the construction of a new 120-ft. bridge to take the place of the old structure over the Mad River on the county line road.

WARREN, OHIO.—We are officially advised that all bids opened on Jan. 9 for concrete work and bridge construction on the road to Mosies Lane have been rejected by the County Commissioners.

WILLIAMSPORT, OHIO.—Bids will be received by the Board of Commissioners of Crawford County, Circleville, Ohio, until Feb. 6 for repairs to bridge at Sulphur Springs, near Williamsport, and for the substructure of a bridge over Dry Run, in Muhlenberg Township.

ADRIAN, IND.—Plans are being prepared by the Wabash Ry. Co. for the construction of a new steel bridge to span the Raisin River near Adrian on the Detroit division. The new bridge will have five spans of girders supported by four piers and two abutments.

ELKHART, IND.—Bids will be received by D. O. Bachelor, Audr., Elkhart County, until 9.30 a. m., Feb. 7, for the construction of a bridge in Elkhart Township, Fish Lake Road.

INDIANAPOLIS, IND.—The Commissioners of Marion County will receive bids until 10 a. m., Feb. 8, for the construction of a bridge over Lick Creek in Warren Township. Albert Sahm is County Audr.

INDIANAPOLIS, IND.—An ordinance has been passed appropriating $55,000 for the construction of eight bridges as follows: Two across Pleasant Run; three across Pogues Run; two across the canal, and one at Minnesota St. Bids will be received by Board of Public Works. Blaine H. Miller is City Engr.

INDIANAPOLIS, IND.—Paul Julian, County Surv., has asked the Board of County Commissioners for appropriations amounting to about $140,000 for the construction of bridges and culverts, as follows: $10,000 for a bridge over the canal in Washington Township, $10,000 for a bridge over Williams Creek in Washington Township, $30,000 for a bridge over Little Eagle Creek in West Washington St., Wayne Township; $7,500 for a bridge over Indian Creek in Lawrence Township, and $40,000 for bridges and culverts in the county.

ROCKVILLE, IND.—Plans are being prepared on which bids will be asked by the Commissioners of Spencer County for the construction of a bridge over Big Raccoon River at Armiesburg.

SAGINAW, MICH.—The Michigan Central R. R. Co. is planning to construct a bridge across the river at Emerson St. G. H. Webb is Ch. Engr. Bridges, Detroit, Mich.

CHICAGO, ILL.—The Finance Committee of the City Council has appropriated $37,000 for repairing the Twelfth St. viaduct, and $23,000 for the Taylor St. viaduct. B. J. Mullaney is Comr. Pub. Wks.

EAST ST. LOUIS, ILL.—We are officially advised that the Board of Trustees of the East Side Levee and Sanitary District, Seeton Bldg., East St. Louis, will soon ask for bids for the construction of five large railroad bridges over the channel now being dug to divert the waters of Cahokia Creek into the Mississippi River. R. W. Sikking is Clk. Bd.

ROCKFORD, ILL.—S. H. Hand, City Engr., has prepared preliminary plans and sketches for the construction of a concrete bridge to be built this year. Estimated cost, $65,000.

HUDSON, WIS.—The City Council has adopted the report of the Special Joint Committee providing for the construction of a bridge across the St. Croix River, to replace the present wooden structure. Estimated cost, $20,000.

IOWA FALLS, IOWA.—We are officially advised that the Commercial Club of Iowa Falls is considering the construction of a cement arch bridge. F. E. Foster is Secy.

MINNEAPOLIS, MINN.—Bids will be received until Feb. 6 by the County Commissioners, Minneapolis, for repairing Bridge No. 4 in Hanover Village. A. P. Erickson is County Audr.

OMAHA, NEB.—We are officially advised that the cost of constructing a steel viaduct on concrete foundation, 1,400 ft. long, at Eleventh St., over the Union Pacific Ry. and the B. & M. R. R. tracks, is estimated at $85,000.

INDEPENDENCE, MO. — The Jackson County Court has instructed Roland T. Proctor, County Highway Engr., to prepare plans and estimate of cost of constructing a viaduct over the Chicago & Alton R. R. tracks on 15th St. Road to Independence. The structure will probably be of stone or concrete.

TEXARKANA, ARK.—An agreement has been reached by the city and the railroads regarding the construction of a viaduct across their tracks from Broad St. to Carmichael Hill at Elm St.

DALLAS, TEX.—The Dallas County Commissioners' Court has authorized an issuance of $23,000 of bonds for repairing the following bridges: California Crossing, Commerce St., Eagle Ford, Grand Prairie, Sowers, Record Crossing, Grauwyler Crossing, Keenan Crossing, two bridges at Carrollton, one at Trinity Mills and two on Dento Creek.

HOUSTON, TEX.—Bonds for $500,000 have been voted by the citizens for the construction of a reinforced concrete and steel viaduct across Buffalo Bayou at the foot of Main St. H. B. Rice is Mayor.

SAN ANTONIO, TEX.—The Southern Pacific Co. has under consideration plans for the construction of three reinforced concrete and steel viaducts over its tracks in this city. J. D. Mathews is Div. Engr., Tucson, Ariz.

BOISE, IDAHO.—Contracts have been awarded by W. L. Cuddy, County Audr., Boise, as follows: For the construction of steel highway bridge at Ninth St., to the MISSOURI VALLEY BRIDGE & IRON CO., Leavenworth, Kan., at $28,000; for the construction of a steel highway bridge over the Boise River, near Barberton, Idaho, to I. H. FORBES & CO., Caldwell, Idaho, at $8,-395; for removing and resetting Ninth St. bridge to Linder, to the SECURITY BRIDGE CO., Minneapolis, Minn.

SEATTLE, WASH.—A bill has been introduced in the City Council and referred to the Street and Finance Committee providing for the construction of a viaduct from Fourth Ave. S. to Railroad Ave., across to West Seattle. Cost, from $800,000 to $1,000,000. R. H. Thomson is City Engr.

SPOKANE, WASH.—The Board of Public Works has submitted to the Council plans for the construction of a reinforced concrete bridge across Latah Creek, at Chestnut St., between 16th and 18th Aves. Estimated cost, $45,000. Morton Macartney is City Engr.

TACOMA, WASH.—See item under Streets and Roads.

SAN FRANCISCO, CAL. — The Board of Public Works, on Jan. 13, awarded to F. ROLARDI the contract for the construction of the bridge which is to carry the Richland Ave. roadway over the Southern Pacific Ry. tracks, at $8,275.

BUILDINGS.

(*Denotes that this work is advertised in Engineering News.)

BOSTON, MASS.—The State R. R. Comrs. have ordered the construction of three stations on the line of the Riverbank Subway. This is the outcome of an appeal by the Boston Elevated R. R. from the decision for the stations by the R. R. Comrs. They are to be built at Charles St., Dartmouth St. and Massachusetts Ave., approximately a half mile apart. George A. Kimball is Chief Engr. of the elevated lines.

The Talitha Cumi Maternity Home proposes to erect new buildings at Forest Hills. Arthur Perry is Treas. of N. E. Moral Reform Society, which will have charge of the work.

CHELSEA, MASS. — The construction of the second of a group of three schoolhouse buildings will be commenced soon. The three are to occupy a block 550 × 260 ft. The building proposed will be built of red brick with terra cotta trimmings, and will contain 20 rooms. William E. McClintock is Chief of the Bd. of Control.

SPRINGFIELD, MASS.—A modern dormitory will be erected by the trustees of Mt. Harmon to take the place of the Crossley Hall recently destroyed by fire. The new building will contain 100 rooms, and construction will probably start soon. The estimated cost is about $150,000.

HARTFORD, CONN.—The stockholders of the Hartford National Bank have voted, according to press reports, to erect a 12-story building at the corner of Main and Asylum Sts. on the site of the present Catlin Building, which will be torn down.

HARTFORD, CONN.—A 12-story office building is planned by the Hartford National Bank at the corner of Main and Asylum Sts. The present Catlin Bldg. will be razed for the improvement. Estimated cost is about $1,000,000.

NEW HAVEN, CONN. — A contract has been awarded to ABERTHAW CONSTRUCTION CO. by the Winchester Repeating Arms Co. for the erection of a 3-story reinforced concrete storage building on a lot at the end of the present storage building. The building will have brick walls, concrete columns, and will be thoroughly fireproof.

NORTH HAVEN, CONN.—The N. Y., N. H. & H. R. R. is to build a roundhouse at Montowese, in this town. The estimated cost is $200,000. Edward Gegel is Ch. Engr.

WATERBURY, CONN.—The plans for a 12-story office building on North Main St., for William Reither, will be ready for the contractors very soon. The building will have a steel frame and pressed brick front and will cost about $200,000. Bids will be received until about Feb. 1 by the Archs., Griggs & Hunt, 51 Leavenworth St.

BEECHWOOD, N. Y. — Plans are being prepared by Ruilfson & Wilson, Jamestown, N. Y., for the erection of a 1-story building of hollow tile and stucco construction, 180 × 180 ft. The International Bible School is the owner. The estimated cost is $10,000.

BUFFALO, N. Y.—The Health Commissioner has petitioned the City Council for an appropriation for the erection of a public bath house on the site of the Jubilee Water Works at Amherst and Grant Sts. The appropriation will probably be granted.

BUFFALO, N. Y.—The George Irish Paper Corporation, whose warehouse at River and Erie Sts. was destroyed by fire last week, will rebuild at once. The new structure will be about 60 × 186 ft., six stories and basement brick and steel construction. The cost is about $100,000.

BUFFALO, N. Y.—The Common Council has ordered the erection of a 9-room addition to Public School 60, Ontario and Saratoga Sts. Plans to be prepared and bids asked by the Commissioner of Public Works.

NEW YORK, N. Y.—THOMAS T. HOPPER & CO. has the contract for the mason and carpenter work for the office and store building to be erected at 215-219 West 49th St. for James P. Knight, 221 West 49th St. Townsend Steinle & Haskell, 1328 Broadway, are the Archs.

Plans are being prepared by Schwartz & Gross and B. N. Marcus, 347 Fifth Ave., for the improvement of the plot, 50 × 95 ft., at the southwest corner of West Houston and Wooster Sts. A 12-story office will be erected on the site. The Fluri Construction Co., 176th St. and St. Nicholas Ave., is the owner. George V. Fluri is the Pres.

Frederick C. Zobel, 114 East 28th St., has been commissioned by the Twenty-Fifth Construction Co., 31 East 27th St., to prepare plans for the construction of a 12-story loft building, 48 × 98.9 ft., at 143-145 West 29th St.

M. REID & CO., 114 West 39th St., have been awarded the general contract for the erection of a 5-story building, 47.6 × 100 ft., at the southeast corner of Fifth Ave. and 86th St., for William Starr Miller, 39 Fifth Ave. Carrere & Hastings, 225 Fifth Ave., are the Archs.

Plans have been prepared by Goldner & Goldberg, 704 Jackson Ave., for the erection of a 5-story store and tenement building at the northwest corner of Trinity Ave. and 156th St. The estimated cost is about $40,000.

Carrere & Hastings, 26th St. and Fifth Ave., are preparing plans for the erection of a 5-story store and office building at the southwest corner of Fifth Ave. and 48th St. JOHN DOWNEY, 410 West 34th St., holds the general contract.

Goldner & Goldberg, 704 Jackson Ave., are preparing plans for the construction of two 3-story tenement buildings, 43 × 86 ft., on the north side of 169th St., 94 ft. west of Fulton Ave. The cost is about $70,000.

The contract has been awarded to the BRUNO CONSTRUCTION CO., 156 Mallory Ave., Jersey City, for the erection of a cafe and residence at William and Mallory Aves., for H. Blumetti, 144 Williams Ave. Thomas W. Biddle, Jr., 492 West Side Ave., prepared the plans.

Plans are being prepared by Harry T. Howell, 149th St. and Third Ave., for the erection of three 5-story brick flat buildings with stores at the northwest corner of Southern Boulevard and 185th St. The corner house will be 40 × 107 ft., the others 45 × 91.6 × 98.6 ft. The estimated cost is about $125,000.

Plans are being prepared by Thomas Tryon, 37 East 28th St., for the erection of an 8-story studio building, 20 × 99 ft., at 147 West 36th St. Henry R. Drowne, 45 East 17th St., is the owner.

The erection of an 11-story loft and office building is contemplated by the Industrial Realty Co., Andrew G. Dickinson, Pres., 29 West 34th St., at 133-135 West 44th St. Plans have not yet been prepared.

The contract has been awarded to JAMES L. LOWRY, 305 West 40th St., for alterations to the 5-story loft building at 993-995 Third Ave. for Burke W. Cockran, 31 Nassau St. E. C. Horn Sons, 1440 Broadway, are the Archs.

Carrere & Miller, 39 Fifth Ave., are preparing plans for the erection of a 5-story stone residence, 47.6 × 100 ft., at the southeast corner of 86th St. William Starr Miller, 39 Fifth Ave., is the owner. The general contract is held by M. REID & CO., 114 West 39th St.

A brick and stone garage, 103 x 75 ft., will be erected on the southeast corner of 178th St. The Cliff Construction Co., 170th St., is the owner.

Nast & Springsteen, 21 West 45th St., have prepared plans for the construction of a 5-story brick tenement building. Fred F. French, 531 West 113th St., is the owner. The estimated cost is about $30,000.

A general contract has been awarded to the CAULDWELL WINGATE CO., 381 Fourth Ave., for making interior changes to the 4-story loft building at the northwest corner of Fifth Ave. and 38th St. F. V. & J. H. Burton, 384 Broadway, are the owners. J. E. Nitchie, 150 Nassau St., is the Arch.

RICHARD DEEVES & SON, 309 Broadway, have been awarded the general contract for the erection of a business building for the Central Union Gas Co., 350 Alexander Ave., at the northeast corner of Courtlandt Ave. and 148th St., in the Bronx. The structure will occupy a plot 106 × 150 ft. Charles G. Francklyn is Pres.

The Fire Company's Building Corporation, 46 Cedar St., plans the erection of a 20-story fireproof building at 78 to 88 Maiden Lane and 13 to 27 Cedar St. Hugh Ruskin, 46 Cedar St., is Secy.

MARC EIDLITZ & SON, 489 Fifth Ave., have been awarded the general contract for the erection of a 2-story brick and stone building at 49-51 West 33d St. The Mutual Bank, 43 West 32d St., is the owner. Donn Barber, 25 East 26th St., is the Arch. The estimated cost is about $100,000.

A 9-story loft building will be erected by Dr. B. B. Marco on a plot 200 × 25 ft., facing the Williamsburg Bridge on the south, between Mangin and Tompkins Sts. Plans are being prepared.

NEW YORK, N. Y.—A 12-story bank and office building, 65.6 × 66.6 × 75 ft., will be erected at the southwest corner of Orchard St. Rouse & Goldstone, 12 West 32d St., are the Archs. S. Jarmulowsky, 54 Canal St., is the owner. The estimated cost is $200,000.

Thomas W. Lamb, 489 Fifth Ave., is preparing plans for the construction of a 3-story brick and stone theater, 27.10 × 102.2 ft., at 86th St. The estimated cost is $100,-000. The 86th St. Theater Co. is the owner.

SAG HARBOR, N. Y.—It is reported that F. C. Havens, California, will erect a summer hotel on Methodist Hill, overlooking the bay.

SEA CLIFF, L. I., N. Y.—Bids have been received by the Board of Education for the proposed erection of a school building here. The lowest bidder was Henry J. Brown & Son., 1534 Fulton St., Brooklyn, at $52,200. The Johnston Heating Co., 131 East 26th St., New York, was the lowest bidder for the heating, at $7,419.

WOODHAVEN, N. Y.—Plans have been filed and approved for the construction of a hospital for the Little Sisters of the Poor of St. Francis on the block bounded by Elm St., Woodhaven Ave., Fulton Ave. and Vandeveer Pl. The structure will be of brick, four stories high, 293.8 × 219.4. The estimated cost is about $500,000.

PATERSON, N. J.—Plans have been prepared by Henry B. Crosby, Arch., for the erection of a 10-story fireproof hotel at Market and Church Sts., on a plot 75 × 100 ft., for the Totowa Corporation. Granite base with limestone ashlar carried up through the first and second stories will be used, light colored brick and terra cotta above.

ALLEGHENY, PA.—A number of buildings will be erected by J. M. Norris, Supt. of the Allegheny County Industrial Co. The buildings will be erected on 800 acres of ground recently purchased.

BRADFORD, PA.—The contract has been awarded to WILLIAM HANLEY, Bradford, for the erection of the Bradford's new federal building at Chestnut and Corydon Sts., at $64,895.

HAZLETON, PA.—The citizens of this place will, in the near future, erect a new $100,000 school building. E. E. Jeroleman, of New York, has been selected as the Arch.

JOHNSTOWN, PA.—Bids will be received soon by Boyd & Stewart, Archs., for the erection of a church for the United Brethren Congregation. The estimated cost is about $75,000.

PHILADELPHIA, PA. — Benham & Perkenpine will erect 48 2-story dwellings on Baltimore Ave., near 50th St., to cost $140,000. Frank H. Benham will erect 46 2-story houses on Pine St., east of 60th St., to cost $138,000. The Hazel Improvement Co. will erect 19 2-story twin houses on Hazel Ave., west of 55th St., to cost $60,000. J. F. Bradley is Arch. McCudden & Maguire will erect 160 2-story houses on Second, Third, Ritner and Porter Sts., to cost $200,000. Harry H. Heist will erect 46 2-story houses on Gratz St., north of Butler St., to cost $115,000. George A. Nahn has been granted a permit for the erection of 20 2-story dwellings on Stiles, Newkirk, Dover, 28th and 29th Sts., to cost $49,700.

PHILADELPHIA, PA.—According to press reports the Board of Education of Philadelphia voted to expend $1,400,000 for improvement on the schools. Two West Philadelphia buildings, $950,000; additions and improvements to the Girl's Normal School, $50,000; new central building on Parkway, $200,000; lot for Girls' High School in South Philadelphia, $50,000; and additions and improvements to the Northeast Manual School, $140,000.

PHILADELPHIA, PA.—Harry Ellenberg will erect six 3-story buildings, 15.3 x 54.6 ft., north of Lindley Ave. The estimated cost is about $60,000.

PITTSBURG, PA.—The contract for the construction of a 3-story brick annex has been awarded by the Forbes School District Directors to CHARLES H. KERR & CO., at $42,411. The addition will contain a gymnasium, a swimming pool and a manual training school, but will not contain quarters for ordinary scholastic work.

PITTSBURG, PA.—The Ben Avon Presbyterian Church will erect on the old site in Church Ave., a brick and stone church. The estimated cost is about $45,000.

READING, PA.—Property at Third and Bingham Sts. was sold to the King Midas Flour Co. The new owners will soon begin operations in erecting a five-story brick storage and warehouse.

BALTIMORE, MD.—The Magothy Villas Incorporated, Dr. Guy L. Hunner, Pres., 2305 St. Paul St., Baltimore, purchased 183 acres of land in Anne Arundel County, on Magothy River, and will be developed for a residence section, subdivide into building lots, erect cottages, construct curved roads and avenues, and install a drainage system.

BALTIMORE, MD.—A. Schumann & Co., 417 W. Franklin St., is receiving competitive plans for new warehouse at 325 W. Pratt St., four stories, 33 × 150 ft.; brick. Elevators and heating apparatus will be installed.

WASHINGTON, D. C.—A new lighthouse and fog-signal station will probably be erected on the Brandywine Shoals, Delaware Bay. The estimated cost is about $75,000. Senator Frye is interested.

WASHINGTON, D. C.—A building permit has been obtained by the Columbia Hotel Co. for the construction of the Raleigh Hotel at 12th St. and Pennsylvania Ave. The building will be of stone, steel and brick construction, twelve stories high. The estimated cost, $800,000. H. T. Hardenbergh, 47 West 34th St., New York, is the Arch.

WASHINGTON, D. C.—James Knox Taylor, Superv. Arch., Washington, received bids, on Jan. 14, for the construction of the Bureau of Engraving and Printing Building. The work is for the building itself, and not for fittings. Woodbury & Leighton, Boston, Mass., $1,703,457, was the lowest bidder. Other bidders were: J. Henry Miller, Inc., Baltimore, Md., $1,922,900; W. A. Chesterman, Richmond, Va., $1,825,000; Oscawana Building Co., New York, $1,957,000; G. A. Fuller Co., Washington, $1,843,000; W. H. Maxwell, Great Falls, Mont., $1,984,000; John G. Doak & Co., Philadelphia, $1,889,000; Charles McCaul Co., Philadelphia, $1,962,000; Henry Smith & Sons Co., Baltimore, $1,770,000; Thomas H. Melton, Washington, $2,100,449; John T. Brady & Co., New York, $2,080,840; John N. Nolan, Washington, $2,226,237.

ARRINGTON, VA.—The Nelson County Tobacco Warehouse Co., incorporated with $100,000 capital stock, Alla A. Ryan, Pres.; Clendin C. Ryan, Vice-Pres., New York, will construct a tobacco warehouse.

NORFOLK, VA. — Col. J. Bryan Grimes, Secy. of State, has drawn a bill for the Legislature providing for a $1,000,000 bond issue for the erection of an administration building on the north side of Capital Sq.

NORFOLK, VA.—The Board of Control has awarded the contract for the construction of the Police Headquarters, First Precinct Station and Police Court to R. H. RICHARDSON & SONS, Hampton, Va., at $44,273. John Kevan Peebles is the Arch.

PETERSBURG, VA.—American Bank & Trust Co. (formerly Appomattox Trust Co.), appointed a committee to secure plans and specifications and estimates of cost of bank building to replace structure destroyed by fire. William L. Zimmer, Sr., is Pres.; temporary offices in Mechanic Association Bldg.

ROANOKE, VA.—Lakeland Lodge No. 190, Henry Dunnington, Secy., Ancient Free and Accepted Masons, will expend about $45,000 to erect a 4-story lodge building. Plans not determined.

CHARLESTON, S. C.—Bids have been received for the construction of the east wing annex for the Military College of South Carolina. Bids were as follows: Simons-Mayrant Co., $39,873; Standard Contracting Co., $43,724; Johnston-Matthews Construction Co., Florence, $45,450; H. T. Zacharias, $47,770; Charleston Engineering & Contracting Co., $48,845; J. T. Snelson, $53,092; C. Kanapaux, $64,835.

WACROSS, GA.—The lowest bids received by James Knox Taylor, Superv. Arch., Washington, D. C., for the erection of a post-office here was that of A. B. Stannard, St. James Bldg., 1135 Broadway, at $56,000.

BOWLING GREEN, KY.—Bids were received as follows by the Supervising Architect of the Treasury, Washington, for the construction of a post-office at Bowling Green, Ky.: Plowman Construction Co., Philadelphia, $112,929; John G. Unkefer, Minerva, Ohio, $115,710; M. P. Wells, Philadelphia, $118,248; Harry A. Bishop, Chicago, $121,000; Ed. Henry, Catlettsburg, Ky., $122,515; August Ohm, Terre Haute, Ind., $123,000; J. E. & A. L. Pennock, Philadelphia, $123,600; William H. Fissell & Co., New York, $123,900; West Chester Engineering Co., New York, $123,900; Christ Kanzler, Evansville, Ind., $124,475; C. H. Smith, Bowling Green, Ky., $125,000; Ambrose B. Stannard, New York, $127,000; Conners Bros. Co., Lowell, Mass., $134,000; D. J. Phipps, Newport News, Va., $135,000; King Lumber Co., Charlottesville, Va., $135,000; Jacob Bernstein, Louisville, Ky., $138,069; Charles H. Peckworth, New York, $140,573; George H. Rommel Co., Louisville, Ky., $147,000; Hollady & Crouse, Greensboro, N. C., $128,076.

CROOKSVILLE, OHIO.—The citizens are making an effort to meet the requirements of Andrew Carnegie for the construction of a library building. It is proposed to erect a structure costing about $50,000.

LONDON, OHIO.—Wilbur T. Mills, of Columbus, has secured the contract to prepare plans for the proposed $80,000 high school building to be erected in London.

ST. MARYS, OHIO.—A $30,000 contract for a new convent in Minster to replace the one now occupied by Sisters of the Precious Blood, has been awarded to H. J. VANDERHORST, St. Marys.

BRAZIL, IND.—SMITH & APPLE have been awarded a contract for the construction of the Parco apartment house by Charles Minshall, of Terre Haute. Mack Johnson, Brazil, is Arch. The building will be 2-story, 60 × 120 ft.

BROOKVILLE, IND.—The Commissioners of Franklin County have awarded the general contract for the construction of a new court house to I. W. MILLIGAN & CO., Indianapolis, at $71,300; the electric lighting wiring to the BROOKVILLE ELECTRIC CO., at $3,400, and the heating, plumbing and sewage to NEAL & STOLL, Rushville, Ind., at $9,050.

CRAWFORDSVILLE, IND.—The Big Four R. R. has made an appropriation and approved the plans for the erection of a big freight depot on Franklin and Plum Sts. The building will be of brick, stone and cement construction, with an 8-ft. platform on either side. It is understood the job will be let to contract.

CRAWFORDSVILLE, IND.—Michael H. Callahan has ordered plans for the erection of a modern residence on West Pike St. Bids will be asked for as soon as plans are completed.

ELKHART, IND.—Local officials of the Lake Shore R. R. Co. are preparing plans for the erection of a large storehouse, blacksmith shop and oil house. Estimated cost of the entire improvement $3,000,000.

HUNTINGTON, IND.—Edward Smith, St. Comr., is preparing to build a residence. Plans will soon be ready for bidders.

INDIANAPOLIS, IND.—J. S. Halliday has purchased a site on East Georgia St., on which he will build a large 2-story garage. Bids will be received as soon as plans are completed.

INDIANAPOLIS, IND.—The Legislative Committee of the Indiana Legislature has reported favorably on the following appropriations: For the construction of an administration building, $17,000; superintendent's residence, $16,000; laundry building, $13,000; boys' industrial building, $30,000; girls' industrial building, $17,000; mechanical equipment for industrial buildings, $6,000; general equipment, $7,000; sewer and connection with city sewer, $8,000; outside lighting system, $2,000; boiler, stoker and electric generator and engine with necessary brick work connections, etc., $10,000; overhead water storage tank, $2,500; walks, driveways, grading, etc., $9,000. R. O. Johnson is Supt.

SOUTH BEND, IND.—A $5,000 site for a school building in the extreme southern portion of the city has been given to the School Board by Mrs. Lucy Farneman, on which will be erected a new building to cost from $50,000 to $75,000.

WABASH, IND.—Bids will be received Feb. 9, 1911, by the Postmaster of Wabash, Ind., for the complete construction of a post-office building, including wiring, plumbing, heating, etc. Bids will be forwarded to Supervising Architect, Washington, D. C., on Feb. 18. L. A. Dawes, Postmaster.

ANN ARBOR, MICH.—The Board of Regents of the University of Michigan, Ann Arbor, have decided to ask the Legislature for an appropriation of $575,000 to be used in the erection of new buildings, $250,000 for the erection of a science hall, $305,000 for the installation of heating, ventilating, lighting and power plant equipment, and $20,000 for the erection of a storeroom.

DETROIT, MICH.—The Fire Commission, B. W. Stockwell, Secy., Wayne & Larned Sts., have been requested by the Common Council of Detroit to include in their budget an amount large enough to erect and maintain a new engine house in the vicinity of Gratiot and Harper Aves.

Charles B. Warren, 904 Union Trust Bldg., Detroit, has purchased 348 ft. frontage on Lake St. Clair, just north of the property recently purchased by the Country Club. Mr. Warren paid over $50,000 for the site, and announces that he will probably erect a residence on the property.

Rev. Father Bartholmew Szezerba, Pastor of St. Hedwig's Polish Catholic Church, Junction Ave., Detroit, announces that a $175,000 church, with a seating capacity of 3,400, will be started soon to replace the present edifice and school building. Church will have two large towers, to be built of pressed brick and stone, and will have 42,000 sq. ft. of floor space. Competitive plans are being prepared by three firms of Detroit architects, including Kastler & Walsh, Chamber of Commerce Bldg.

CHICAGO, ILL. — The Chicago Board of Education is considering the erection of a school building to cost about $2,500,000. Mrs. Ella Flagg Young is Supt. of the Schools.

MILWAUKEE, WIS.—The Finance Committee of the Milwaukee Common Council has recommended an appropriation of $500,000 in mortgage bonds in the new budget for the proposed municipal interurban railway terminal and station, with the provision that this sum can be used only in case the Common Council votes to purchase the site and to erect the building. Harry E. Briggs is Comr. of Public Works.

The stockholders of the Second Ward Savings Bank, at the annual meeting, approved the project to replace the present building at West Water, Third and Cedar Sts. with a new banking house, to cost, approximately, $50,000. Kirchhoff & Rose, 1311-2 Majestic Bldg., Milwaukee, Archs., have been commissioned to prepare plans and specifications. August Uihlein, Pres.; Charles C. Schmidt is Cashier.

WATERTOWN, WIS.—Construction work will soon commence on a federal building. The Treasury Dept. has advertised for bids on the plumbing, gas fitting and heating.

WAUSAU, WIS. — The Wausau Common Council has appointed a committee to secure plans and specifications for the construction of the proposed $50,000 City Hall and municipal building. John F. Lamont is Mayor.

MASON, IOWA.—A movement has been started for the erection of a hospital to be operated by the Mercy Sisters of Dubuque. A site has been offered free of charge. The estimated cost of the building is about $50,000.

MINNEAPOLIS, MINN.—The Legislature has been asked to appropriate $350,000 for a building for work on animal biology.

MINNEAPOLIS, MINN.—Engineers representing Stone & Webster, Boston, have announced that a new station of steel and concrete will be erected at a cost of $750,000.

ONEIDA, S. DAK.—Bids will be received by the Board of County Commissioners of Sully County for the construction of the new court house at Oneida, to be opened Feb. 16. The estimated cost of building is about $65,000. Samuel H. Lea is State Engr.

EL PASO, TEX.—Bids will be received by the Engineer of the Maintenance of Way Dept., El Paso & Southwestern R. R., until Jan. 31, for the construction of a club house, bath house and amusement building.

HOUSTON, TEX. — Krupt & Taffly will probably erect a 12-story building at the corner of Main and Prairie Aves.

COLORADO SPRINGS, COLO.—A modern office and store building will be erected on the southeast corner of Lyon St. and Platte Ave. The estimated cost is about $75,000. George A. Taff is the Arch.

SALT LAKE CITY, UTAH.—Bids will be received until Feb. 2 by Superv. Arch. J. K. Taylor for the construction of a post-office building here. The estimated cost is about $140,000.

PHOENIX, ARIZ.—Harry J. Jones, New York, has commissioned local architects to prepare plans for the erection of a 5-story reinforced concrete building, 100 × 100 ft., to be erected on Washington St. The estimated cost is about $150,000.

PORTLAND, ORE.—Plans have been prepared by Roberts & Roberts, Arch., for a 3-story apartment house to be built on 94th and East Yamhill for H. Hale.

PORTLAND, ORE.—An office building will be erected at the northeast corner of Fourth and Washington Sts. W. E. Nelson is the Arch. The facade of the building will be of gray pressed brick, and the trimming will be of cut stone for the three lower stories and gray terra cotta for the remaining nine stories. The estimated cost is about $300,000.

FRESNO, CAL. — W. G. TREWHETT, Hanford, Cal., has been awarded contract, at $50,000, for the erection of a 4-story apartment house at Tulare and North Sts., for Dr. H. H. Trowbridge and Dr. J. L. Maupin, Fresno. The building will be 51 × 100 ft., concrete foundation and basement, red pressed brick front with stone trim, and composition roof; marble and tile entrance, overhung with a marquise; steam heat, automatic electric elevator. B. G. McDougal, San Francisco, is Arch.

LOS ANGELES, CAL.—Krem & Erkes, Henne Bldg., Archs., are p ring the architectural plans for the bu gs to be erected at Huntington Beach, onstitute the new factory of the Holl ugar Co. The machinery plans have b made by the engineers of the company, to conform to them several large ngs will be required. The main bui will be 250 × 64 ft., two stories in he with one section three stories high an section, 60 × 64 ft., at one end six sto high. A warehouse, 64 × 176 ft., and a ely fireproof, will also be constructed. he boiler room will be 40 × 100 ft.; pow house, 96 × 40 ft.; large brick smokestack ne kilns, etc. The entire construction be fireproof, steel frame, brick walls inforced concrete floors, and reinforced te roof. A frame office building, 35 × 5 to contain a concrete and steel vault, l six 7-room frame bungalows will also erected. Carl Leonardt, H. W. Hellman g., has the general construction contra a unit basis. The cost will be $400,000.

The engineering department he Los Angeles Ry. Co. are preparing s for a car barn, to be one story high, × 625 ft. in size, to be erected in the western part of the city. It will be con ucted of reinforced concrete, four styles o nforcement, square twisted bars, the K system, the Pittsburg standard, and th Monolith system. The exterior will have lastered cement finish. The roof will be inforced concrete, covered with composit The windows will be Fenestra steel h, with glazed wire glass.

Aaron Hill will erect two buildings at once on a 4½-acre site on the El Monte Rd., near East Lake Park. One building will be 100 × 100 ft., and the other 200 75 ft., both one story in height; two garages and a house for employees will also be constructed. The plans are prepared by Mr. Hill, care King Edward Hotel, Los Angeles, who will erect the buildings by day work. The factory will be used in the manufacture of brass and iron beds.

R. C. Gillis and J. J. Davis have purchased a site at Front and Second Sts. on which they propose to construct a 10-story structure. The estimated cost will probably be about $1,000,000.

LOS ANGELES, CAL.—The following bids were opened by the County Board of Supervisors for the erection of a surgical ward at the County Hospital. The bids were submitted separately, (1) for general contract, with deductions for concrete and excavating omitted; (2) for the plumbing and gas-fitting; (3) for vacuum steam heating system; (4) for the elevators. General contract, F. O. Engstron Co., $197,164. deductions for extra concrete, 30 cts. per cu. ft.; for excavating, 3 cts. per cu. ft. Time limit, 10 months. Alta Planing Mills Co., $218,876; concrete, 30 cts.; excavating, 3 cts.; time limit, eight months. J. B. Dawson, $219,400; concrete, 55 cts.; excavating, 5 cts.; time limit, nine months. L. A. Planing Mills Co., $224,990; concrete, 25 cts.; excavating, 3 cts.; time limit, 12 months. Chas. G. Ross, $225,353; concrete, 30 cts.; excavating, 6 cts.; time limit, 10 months. C. Leonardt, $231,480; concrete, 40 cts.; excavating, 3½ cts.; time limit, nine months. J. F. Hall Martin Co., $245,000; concrete, 30 cts.; excavating, 2 cts.; time limit 10 months. Plumbing and gas fitting: Lohman Bros., $23,896; Blumve & Jay Co., $24,000; F. M. Parker, $26,500; Thomas Haverty Co., $26,675; Howe Bros., $26,800; J. Hokoin, $27,400; W. D. Newell, $29,179. Vacuum steam heating: Thomas Haverty Co., $7,595, for extra pipe line $350; W. D. Newell, $8,044, extra work, $380; American Heating Co., $8,065, extra work $432; Blumve & Jay Co., $10,267, extra work $530. Elevators: Otis Elevator Co., $3,150; all bids taken under advisement. The building will be 100 × 130 ft., brick, five stories, steel frame, concrete basement, reinforced concrete floors, hollow tile partitions, composition roof. The plans also include a 2-story brick stable, 38 × 100 ft., cement floors and composition roof. Hudson & Munsell, Archs., Stimson Bldg.

SANTA CRUZ, CAL. — GRANT FEE, of San Francisco, has been awarded contract for the construction of the U. S. post-office and federal building here at $93,600.

WATER SUPPLY—IRRIGATION.

(*Denotes that this work is advertised in Engineering News.)

WEST BROOKFIELD, MASS.—We are officially advised that a bill has been introduced in the legislature providing for a bond issue of $30,000 for the construction of new water-works here. Samuel Wass is Town Secy. Noted on Jan. 12.

CHERRY CREEK, N. Y.—The contract for the construction of the water system has been awarded to E. SWANSON, Jamestown, N. Y. Estimated cost, $30,000.

GENEVA, N. Y. — The Board of Public Works has awarded the contract for iron pipe and specials for the new water main to be laid from the pumping station to the reservoir to CHARLES MILLER & SON CO., Utica, N. Y., at $20.45 per ton for pipe and $45 per ton for specials. Cost, about $30,000.

SCHENECTADY, N. Y.—The city is considering the construction of a large storage reservoir, recommended by the Commissioner of Public Works in his annual report. Noted on Jan. 10. T. Leland Fitzgerald is City Engr.

YONKERS, N. Y.—The Board of Contract and Supply received bids, on Jan. 16, for furnishing and delivering on the public dock, at Yonkers, before March 15, 1911, 245 lengths of 12-in. pipe, weighing 1,100 lbs. per length, all pipes in material, dimensions, manufacture, coating, etc., to be in all respects according to the specifications for c.-i. pipe adopted by the American Water Works Association in 1908. The bids follow: U. S. Cast Iron Pipe & Foundry Co., $21.15 per ton of 2,000 lbs.; JOHN FOX CO., 253 Broadway, New York, $20.70 (awarded con-

tract); Cam[illegible] Iron Works, $20.86; Charles Millar & [illegible] Co., $24.00; Warren Foundry Co., $21.8[illegible]

GLEN [illegible]E, N. J.—The borough will construc[illegible]er system. An appropriation has bee[illegible] to secure plans and estimates of cost.

PLAIN[illegible]D, N. J.—The installation of a munic[illegible] water plant is being discussed. Andrew [illegible]avitt is City Engr.

*SOU[illegible] RIVER, N. J.—We are officially advised [illegible] plans and specifications for the constru[illegible] of a suction well, to be built of brick & [illegible]ncrete, 25 ft. in diameter and 33 ft. dee[illegible]y be seen at Borough Hall, South River, [illegible] at the office of W. W. Young, Consu[illegible] Engr., 220 Broadway, New York. Bids a[illegible]ked by the Borough Council until 8 p. [illegible] Feb. 13. Advertised last week.

BAL[illegible]ORE, MD.—According to the "Ma[illegible]urer's Record," Baltimore, the Wat[illegible]partment, Alfred M. Quick, Water Eng[illegible] soon have plans for a dam to be cons[illegible] near Loch Raven, 237 ft. above mea[illegible] impounding about 20,000,000,000 gallo[illegible] water. The plans will provide for a p[illegible] increase in height to dam to 275 ft., [illegible] would increase impounding capaci[illegible] about 58,000,000,000 gallons. Two sets [illegible]lans are being prepared, one providi[illegible] for a dam straight across the river and [illegible] other for a dam curved upstream. The [illegible]arding of this contract will begin actu[illegible] work of improving the water supply out [illegible] the $5,000,000 loan. As soon as work on [illegible] dam progresses a filtration plant with a ca[illegible]city of 120,000,000 gallons daily will be [illegible], also provided for out of the $5,000,0[illegible] loan.

COLONIAL BEACH, VA.—The city has voted $37,000 of bonds for the construction of water-works, sewerage and other improvements. H. W. B. Williams is the Mayor.

PORTSMOUTH, VA.—The citizens have voted to issue $600,000 of bonds for the improvement of the water system.

ANNABELLE, W. VA.—The Four States Coal & Coke Co., Frick Bldg., Pittsburg, Pa., is planning the construction of a water-works and sewer system. Estimated cost, $5[illegible]

COLLEGE PARK, GA.—Bonds for $50,000 have been sold, the proceeds to be used for water works and sewers.

DALTON, GA.—The city has engaged H. S. Jaudon, Savannah, Ga., to prepare plans for the construction of water-works with a capacity of 2,000,000 gallons. Estimated cost, $30,000. Bids will be opened about Feb. 16.

GAINESVILLE, GA.—The city will spend $100,000 for improving and extending the water and sewer system. J. W. Barnett, Athens, Ga., is Consult. Engr.

TALLADEGA, ALA.—The City Council has appropriated $10,000 for the extension of the water and gas mains.

LAUREL, MISS.—The Mayor has recommended the enlargement and improvement of the water plant.

CLARKSVILLE, TENN.—The city has retained James Nisbet Hazlehurst, Atlanta, Ga., to supervise the reconstruction of the water system. Estimated cost, $50,000.

EARLINGTON, KY.—The St. Bernard Mining Co. has had plans prepared for the construction of the reservoir for the water system owned by the company. John B. Atkinson is Pres.

ANDOVER, OHIO.—Plans are being prepared for the construction of a brick and concrete pumping station here. L. E. Chapin, Frick Bldg., Pittsburg, Pa., is Engr.-in-Charge.

TROY, OHIO.—Bids will be received until 10 a. m., Feb. 4, by A. E. Sinks, County Audr., Troy, for constructing water mains from the intersection of Water and Adams Sts., to the Miami County Infirmary.

WOOSTER, OHIO.—Bids will be received by S. E. Smith, Dir. Pub. Ser., until noon, Feb. 31, for the construction of an addition to the water-works system. The following will be required: One duplex cross-compound air compressor of the Myer Valve Gear construction or other approved type of valve gear, compressor to be of 500-ft. capacity at a speed not to exceed 150 r.p.m., steam pressure 100 lbs.; air pressure, 90 to 100 lbs. One air receiver of approved size. One 100-HP. Scotch Marine type boiler, complete with 50 ft. of stack. Air compressor and boiler to be erected on foundation provided by contractor. Proposition to include piping for four 8-in. wells, with well heads and foot pieces and all valves as shown on blue prints, which can be had on application. Also all pipe work to connect with compressor in the pump station. The well foot pieces to be of the Indiana Air Pump Co.'s design, or their equal, and of a size that will handle 200 gallons or more per min. Bidders must furnish drawings showing detailed construction of compressor and well foot pieces, and complete specifications of everything they agree to furnish.

MISHAWAKA, IND.—The City Council has ordered plans for the construction and equipment of a pumping plant. The building will be of brick and concrete. The power will be electricity.

SHELBURN, IND.—Official action has been taken toward the installation of a modern water-works system here.

DETROIT, MICH.—The Water Board, on Jan. 10, awarded contracts for furnishing 547 water-gate valves and 130 test boxes to the ROE-STEPHENS MFG. CO., Detroit, and for 200,000 large special castings to the GREAT LAKES ENGINE WORKS, Detroit, at $60 per ton.

HOMER, MICH.—T. C. BROOKS & SON, Jackson, Mich., have been awarded the contract for constructing a complete system of water-works here. The town has $25,000 available for this purpose.

CHICAGO, ILL.—The Finance Committee, on Jan. 19, appropriated $4,000,000 for improving the water service. The committee appropriated $534,000 for new mains in various sections of the city, and $200,000 for high-pressure mains in Clybourn Ave. B. J. Mullaney is Comr. Pub. Wks.

CHICAGO, ILL.—The City Council is considering the installation of a high-pressure water system in the stock yards. B. J. Mullaney is City Engr.

The following bids were submitted to B. J. Mullaney, Comr. Pub. Wks., for furnishing and delivering c.-i. water pipe and specials. Pipe: U. S. Cast Iron Pipe & Foundry Co., 638 The Rookery, Chicago, $23.75 per ton for all sizes of pipe. Specials: Flange special, U. S. Cast Iron Pipe & Foundry Co., $54.25 per ton; hub and spigot specials, $44.65 per ton; Brady Foundry Co., 35th St. and Ashland Ave., flange specials, $70 per ton; hub and spigot specials, $60 per ton.

*CHICAGO, ILL.—Bids will be received by the city until 11 a. m., Feb. 1, at room 705 City Hall, 200 Randolph St., for furnishing and delivering on streets in the city approximately 2,300 tons of 36-in. pipe and 1,000 tons of 30-in. pipe, according to plans and specifications on file in the office of the Department of Public Works. B. J. Mullaney is Comr. Pub. Wks.

HIGHLAND PARK, ILL.—Bids will be received by the Fire and Water Committee of the City Council until 8 p. m., Jan. 30, for furnishing and installing one 3,000,000-gallon Corliss cross-compound high-duty crank and fly-wheel pumping engine. H. L. Bowen is Comr. Pub. Wks.

KINGSTON, ILL.—Bids will be received by the Village Board until Feb. 4 for the construction of a system of water-works.

FAIRFIELD, IOWA.—The city is considering the improvement of the water and lighting systems.

HANOVER, KAN.—Bids will be received until Feb. 6 by Dugald Spence, City Clk., for furnishing material and constructing a pumping station consisting of a new power house and well, and the moving and resetting of certain pumping machinery and installing same in the power house and well. George P. Taylor is Engr., Stockton, Kan.

KANSAS CITY, KAN.—The sum of $375,000 remaining from the $900,000 voted for the extension and improvement of the water-works system, will be used for extension of mains and for hydrant service in portions of the city without such service.

BATTLE CREEK, NEB.—The citizens, on Jan. 10, voted to construct water-works, to cost $10,000. G. T. Richardson is Village Clk.

BEATRICE, NEB.—The contract for the construction of the water and lighting system here has been awarded to the MATHEWS CONSTRUCTION CO., Kansas City, Mo. The W. K. Palmer Co., 717-720 Dwight Bldg., Kansas City, Mo., is in charge of the engineering work.

DUNDEE, NEB.—The citizens are considering the construction of a water-works system. Estimated cost, $50,000. I. S. Leavitt, Dundee, is interested.

GRAND ISLAND, NEB.—Plans and specifications have been prepared by the W. K. Palmer Co., 717-720 Dwight Bldg., Kansas City, Mo., for the improvement of the water and lighting system and the construction of a new power plant here.

NORFOLK, NEB.—Preliminary plans and specifications have been prepared by the W. K. Palmer Co., Kansas City, Mo., for water and lighting improvements here.

NORTH BEND, NEB.—Frank D. Howe, City Clk., will receive bids until 8 p. m., Feb. 17, for the installation of an auxiliary pumping station, including wells, building, pipes, connections, engine and all necessary material.

HURON, S. DAK.—Bids will be received until Feb. 1 by the City Clerk for constructing water-works, to include a 750,000-gallon concrete reservoir, 200,000-gallon elevated tank, a 1,400-gallon per min. pumping plant. Alternate bids will be received on steam, oil engine and gas producer plant. Estimated cost, $40,000. L. P. Wolff, St. Paul, Minn., is Consult. Engr.

MANDAN, N. DAK.—The City Commissioners have voted to accept the plans submitted by Burns & McDonald, Scarritt Bldg., Kansas City, Mo., for water-works improvements. Noted on Jan. 12.

*BOZEMAN, MONT.—Bids will be received until 5 p. m., Feb. 16, by A. M. Brandenburg, City Clk., for the excavation required to enlarge the reservoir of the Bozeman city water-works and increasing the size of the dam and banks with the excavated material; and for laying concrete on the sides, slopes and bottom of the enlarged reservoir of the Bozeman city water-works, amounting to about 4,846 sq. yds. For details, see advertisement in this issue.

*TOWNSEND, MONT.—Bids will be received by E. H. Goodman, Town Clk., until Feb. 14 for the construction of a water-supply system, pumping system type, with elevated tank. Estimated cost, $35,000. C. M. Thorpe is Engr. of Bozeman.

CHAFFEE, MO.—The cost of the water-works extensions here has been estimated at $20,000. The work will include 27,000 ft. of 6-in. c.-i. pipe. M. S. Murray, Sikeston, Mo., is Engr. Noted on Jan. 19.

*KANSAS CITY, MO.—Bids will be received by the Board of Fire and Water Commissioners until 2 p. m., Feb. 9, for the design, construction and delivery f. o. b. cars at the city water-works station, Quindaro, Kan., of two meters of the Venturi type and necessary registering and recording attachments, for installation, one on a 48-in. pipe line, the other on a 36-in. pipe line, all in accordance with plans and specifications of the said Board. E. B. Harrington is Secy.

WEBB CITY, MO.—Bids will be opened about Feb. 14 by the city for the construction of a reinforced concrete reservoir for the Webb City & Carterville Water Co. Capacity, 1,500,000 gallons. Plans may be obtained at the company's office.

ARANSAS PASS, TEX.—The city has voted $25,000 of bonds for the construction of a water-works system.

CANADIAN, TEX.—The city is considering the issuance of $20,000 of bonds for water-works and sewerage. R. H. Speller is City Engr.

FT. WORTH, TEX.—The citizens, on Jan. 12, voted to issue $1,500,000 bonds for water-works improvements, including the construction of a special water supply for the south side and a large surface reservoir above the city. J. D. Trammel is City Engr.

GAINESVILLE, TEX.—The city has voted $150,000 of bonds for the purchase and improvement of the plant of the Gainesville Water Co. J. W. Pickett is Mayor.

LOMETA, TEX.—The water and light plant here has been purchased from E. R. Goodson by J. E. Baker, of Killeen, Tex. He will make enlargements and other improvements.

LYFORD, TEX.—A. L. Stanford, of Lyford, and associates, have taken the preliminary steps toward constructing a system of irrigation in the lower Rio Grande Valley which will be the means of reclaiming about 60,000 acres of land. The proposed system will cost about $1,200,000. The preliminary surveys for the main canal and laterals have been made and it is stated that the project is entirely feasible. The company which is in process of formation to carry out the extensive plans will be composed of land owners to be directly benefited by the consummation of the project. It is stated that there are about 1,000 owners of land comprising the 60,000 acres and that enough of them have already signified their support of the project to make it a success. The estimated cost per acre of the proposed irrigation system is $20. It is claimed that by operating the company as a mutual proposition the cost of irrigation can be kept down to about $2 per acre per annum. While the primary purpose of the canal will be to irrigate 60,000 acres, it will be constructed on a scale to later on furnish water for 150,000 acres. F. S. Miller, Mercedes, Tex., is Engr.

TAYLOR, TEX.—Andrew J. Zilker, Auston, Tex., who recently took over the water-works system here will install a new pumping plant. He has also agreed to increase the present storage capacity; to replace the wrought-iron mains, both in the town and on the pumping line that runs to the plant on the San Gabriel River, with c-i. mains; to install 10-in. mains instead of 6-in. mains, and to install additional and larger pumps. Noted on Jan. 12.

HASKELL, OKLA.—The citizens, on Jan. 5, voted to issue $25,000 of bonds for the construction of a water-works system.

PROVO, UTAH.—John M. Holdaway, Supt. W-Wks., has recommended the laying of water mains in streets not at present so provided.

CARSON CITY, NEV.—We are officially advised that the U. S. Reclamation Service proposes to construct the Carson River storage dam for irrigation purposes with the forces of the Reclamation Service. Work will begin in the spring. Noted on Jan. 12. D. W. Cole is Engr., Fallon, Nev.

BENSON, ARIZ.—J. S. Douglas, of Douglas, Ariz., and W. H. Brophy, of Bisbee, Ariz., have been granted a franchise by the Board of Supervisors for the use of the streets and alleys of Benson for laying a distributing system of water mains and pipes and to install a water-works plant here; also for furnishing the town with electric lights and power. The electric current will be transmitted to Benson from the power plant at Douglas.

ROOSEVELT, ARIZ.—Bids will be received until 2 p. m., Feb. 15, by the Reclamation Service, Los Angeles, Cal., for furnishing centrifugal pumps, motors, transformers and switchboards for centrifugal pumps for Salt River project, Arizona. W. A. Farish is Engr.

CENTRALIA, WASH.—The City Council is planning to acquire a city water system, to cost $200,000, if present estimates are verified. The present water system covers water supply from the Skookemchuck River. The present service is derived from pumping while the suggested system would be gravity supply.

NACHES, WASH.—The Secretary of the Interior has rejected as excessive all bids received for the construction of two patrol houses in connection with the Tieton Unit, Yakima irrigation project, Washington, and has authorized the Reclamation Service to re-advertise at once among local contractors for the construction of these buildings. C. E. Crownover is Project Engr., Naches.

FALLS CITY, ORE.—The citizens have voted in favor of issuing $25,000 of bonds for the installation of a water-works system.

HOOD RIVER, ORE.—The Hood River Irrigation Co. will issue $20,000 of bonds for improvements to its system. L. Morse is Pres.

LAKEVIEW, ORE.—W. C. Parrish, Supt. Eastern Oregon Light & Power Co., is making preparations to establish a large irrigation system in Harney Valley. It is the intention to construct large electrical pumping plants to operate from the Silvios River.

ALTURAS, CAL.—The city has voted to issue $33,000 of bonds for the installation of a water system.

BRAWLEY, CAL.—The GEORGE A. ROGERS CO., Stimson Bldg., Los Angeles, Cal., has been awarded the contract, bids opened on Jan. 10, at $28,201, for constructing the municipal water system. Other bidders were: California Ornamental Brick Co., Los Angeles, $28,909; Colton Hardware Co., Colton, Cal., $27,660. The system will consist of a 12-in. vitrified pipe line, leading to two 300,000-gallon settling tanks, and 12-in. vitrified pipe line to the pumping sumps, frame and galvanized iron pump house, duplicate pumping plant, consisting of a centrifugal pump with capacity of 500 gallons per min., driven by 20-HP. distillate engine; for fire section, a pumping unit, with a capacity of 500 gallons per min., direct-connected to 35-HP. motor; redwood tank, 20 ft. diameter, 22 ft. high, carried on 50-ft. steel tower; 140 ft. 10-in. c.-i. pipe, 400 ft. 8-in. c.-i. pipe, 515 ft. 6-in. c.-i. pipe, 7,100 ft. 4-in. galvanized pipe, 21,400 ft. 2-in. galvanized pipe, 22 fire hydrants.

COVINA, CAL.—The Covina Irrigating Co. has decided to spend from $150,000 to $175,000 for the development of additional water. A series of wells will be driven in Irwindale.

GLENDORA, CAL.—The Mutual Water Co. has appropriated $15,000 to develop a new water supply. A number of wells will be sunk.

PASADENA, CAL.—The Directors of the North Pasadena Land & Water Co. have let the contract for excavation of the new 5,000,000 gallon reservoir to JOHN LEE. The contract for cement work will not be let until excavating is completed.

SEWERS.

(*Denotes that this work is advertised in *Engineering News*.)

CAMBRIDGE, MASS.—Bids will be received until Feb. 1 for lumber, brick, sewer pipe, cement, broken stone and iron castings, by Lewis M. Hastings, City Engr.

MELROSE, MASS.—Bids will be received until Jan. 26 by Geo. O. W. Servis, Engr. and Supt. Public Works, for sewer pipe, water pipe, edgestone, flagging and brick.

BUFFALO, N. Y.—The City Council has ordered construction of tile sewers as follows: 18, 15, 12 and 10-in. in Lang and Weber Aves., between Rogers St. and Delavan Ave., and 15 and 10-in. in Wende Ave., between Genesee and East Ferry Sts.

GLEN COVE (L. I.), N. Y.—The city is considering the construction of a sewer system, at a cost of $5,000 per mile, or a total of $100,000. William Fuller is Engr.

NORTH PELHAM, N. Y.—The citizens of North Pelham have voted to enter into a contract with the villages of Pelham and Pelham Manor to install an outlet sewer. The estimated cost is $15,000.

PASSAIC, N. J.—We are officially advised that the city is considering the installation of a sewer in Madison, Lydia and other streets. Profiles for the improvement have been prepared. J. A. Doolittle is City Engr.

*SUMMIT, N. J.—Bids will be received until 8.30 p. m., Feb. 7, for the construction of 4,960 lin. ft. of 8 and 10-in. vitrified pipe sewer in Springfield Ave. and Tulip St., and manholes, excavation, etc., necessary to same. Plans and specifications at the office of John S. Stiger, City Engr.

CHESTER, PA.—The contract has been awarded to the J. J. WILLIAMS CO., 1828 West Fourth St., for installing 375 ft. of 36-in. cast-iron pipe for the extension of the sewer at Welsh St., Chester, Pa., out of the loan of $600,000 for the improvement of sewers and concrete dock.

CONNELLSVILLE, PA.—Plans have been prepared by J. B. Hogg, of Connellsville, for a comprehensive sewage system. The plant will occupy about ten acres and will dispose of 2,000,000 gallons of sewage daily. The estimated cost is $150,000.

FAIRVIEW, PA.—Bids will be received until 1 p. m., Jan. 26, by H. G. Ashmcap, 608 Real Estate Trust Bldg., Philadelphia, for completing sewer and storm water pipes for the hospital for the criminal insane.

WASHINGTON, D. C.—E. G. GUMMEL has been awarded the contract for the construction of sewers in the District of Columbia. Excavation, 55 cts.; sewer brick masonry, $14; vitrified brick masonry, $20; concrete masonry, B, $7.

COLONIAL BEACH, VA.—On Jan. 12 the city voted on a bond issuance to the amount of $37,000 for the construction of a sewerage system. H. B. Williams is Mayor.

ANNABELLE, W. VA.—A sewer system is contemplated by the Four States Coal & Coke Co., Frick Bldg., Pittsburg, Pa. The estimated cost is $50,000.

EASTON, GA.—Clyde Potts, 30 Church st., New York, is preparing plans for the construction of a sewerage system and disposal plant for Easton, Ga.

ST. PETERSBURG, FLA.—The contract has been awarded to E. B. COOPER, St. Petersburg, for the construction of a sewer system requiring about 4,960 ft. of pipe, 3,100 ft. of 6-in. pipe, 660 ft. of 10-in. and 1,200 ft. of 8-in. pipe.

BOWLING GREEN, OHIO.—An ordinance has been adopted providing for the construction of a sewer in Wallace St.

BRYAN, OHIO.—Plans have been prepared for the construction of a sewer system, but no date has been set for taking bids. H. H. Sharp is Clk.

ELYRIA, OHIO.—The City Council adopted resolutions to go ahead with the improvement of Chappell St., from Broad St. to Second St., by construction of a sewer and East Broad St., from Washington Ave. to East Ave., by construction of a sewer.

HAMILTON, OHIO.—The City Council has ordered the preparation of plans for the sewering of High and Vine Sts.

MILLERSBURG, OHIO.—The City Council has adopted an ordinance declaring it necessary to construct sewers in Walnut, Walkup, Grant Sts. and an alley.

MANSFIELD, OHIO.—A petition has been filed with the city authorities to provide for the sewering of Perry St.

RIPLEY, OHIO.—Surveys have been made by the city engineer for a sewer to be constructed the coming year to cost about $5,-300. L. V. Williams is Mayor.

SEBRING, OHIO.—The city authorities contemplate the construction of 12 miles of sewers during the year of 1911.

STRUTHERS, OHIO.—The City Council is considering the advisability of constructing sewers to be ½ mile in length in Poland, Stewart and Hawthorne Sts.

YOUNGSTOWN, OHIO.—A resolution was adopted by the City Council to construct a sewer in Marble St.

WEST LAFAYETTE, OHIO.—Authorization has been made by the city authorities for the construction of sewers, to cost about $20,000.

WILMINGTON, OHIO.—The citizens are urging upon the City Council the necessity of constructing a sewer system, but so far Council has not taken any action.

DETROIT, MICH.—The Comr. of Public Works, J. J. Haarer, 104 City Hall, Detroit, Mich., will probably include in his budget an item of $870,000 for two trunk sewers, one to run under Mt. Elliott Ave., and the other to run under 23d St. Bonds were voted last fall for this purpose conditioned on the bonding limit being raised at the fall election, but the proposition did not carry. It will go to the people again in the spring and if not carried the Commissioner will include the above amount in his budget.

DETROIT, MICH.—Bids will be received until 10 a. m., Jan. 26 by the Board of Public Works for the erection of the Fairview sewer pumping station inlet and outlet. J. J. Haarer is Comr.

*WYANDOTTE, MICH.—Bids will be received until 7.30 p. m., for furnishing all the material and labor necessary to construct a sewer system here. Plans and specifications at the City Clerk's office.

LA GRANGE, ILL.—Bids will be received by the Board of Local Improvements of the Village of La Grange, Illinois, at the Village Hall, until 8 p. m., Feb. 1, for constructing a concrete outlet sewer, a concrete dosing chamber and filter beds, also a concrete and brick pumping station and machinery. Plans and specifications may be had at the office of the village clerk in La Grange, or at the office of W. B. Ewing, Civil Engr., 1208 Chamber of Commerce.

OCONOMOWOC, WIS.—Bids will be received for the construction of approximately 12,000 lin. ft. of sanitary sewers about Feb. 1. Clarence Schoenike is City Clk.

ANAMOSA, IOWA.—The City Council has authorized the installation of a sanitary sewer in North Garnaville St. The contract has been secured by E. W. HARRISON.

CLINTON, IOWA.—A drainage system will be constructed here. Frank W. Leedham is County Audr.

GARNER, IOWA.—Bids will be received until noon, Feb. 8, by W. L. Titkin, Hancock County, for the construction of drains in Drainage Districts 1 and 2. Specifications may be obtained at the office of the County Auditor.

ALBERT LEA, MINN.—The contract for lateral sewer No. 4 has been awarded to PASTORET & LAWRENCE, Duluth, at $7,-647.

ST. PAUL, MINN.—The Board of Public Works will award the contract soon for the construction of a sewerage system for North St. Anthony Park. The estimated cost is about $130,000.

WARREN, MINN.—Bids will be received until 10 a. m., Feb. 4, by the Auditor of Marshall County for furnishing about 2,200 ft. of corrugated culverts. Plans and specifications were prepared by W. R. Hoag, 1320 S. E. 7th St., Minneapolis.

GARDEN CITY, KAN.—Plans are being prepared for the construction of a complete sewerage system in Garden City. The estimated cost is about $60,000.

OMAHA, NEB.—Plans have been prepared by J. E. Bruce, Acting City Engr., for the construction of a sewer system. The estimated cost is about $1,051,000.

ST. LOUIS, MO.—Bids will be received until noon, Feb. 3, by the Board of Public Improvements, Room 300, New City Hall, for the construction of Baden public sewer, second section, from the end of the first section at or near Oberbeck St. westwardly to Florissant Ave., under authority of Ordinance No. 25394, embracing 4,557 ft. of reinforced concrete sewer, 14 × 11 ft. 2¾-in. inside dimensions, and 3,000 ft. of lateral pipe sewers, 8-in. diameter, with inlets and appurtenances. Maxime Reber is Pres.

CANADIAN, TEX.—See item under Water Supply-Irrigation.

CORSICANA, TEX.—The contract for the construction of a sewerage system in the southwestern section of the city has been awarded to TRUEHART & JACKSON, San Antonio, at $17,364.

GLOBE, ARIZ.—The organization of a local company for the purpose of constructing a system of sewers for this place is being promoted. Information may be obtained from Mayor Coplen.

CHEHALIS, WASH.—J. MURPHY, Tacoma, has been awarded the contract for the installation of the South Chehalis sewer system at $51,258.

PORTLAND, ORE.—Plans for the installation of the Killingsworth Ave. and Union Ave. sewer have been completed. The estimated cost is about $250,000. J. W. Morris is City Engr.

ANAHEIM, CAL.—The city has adopted plans for a municipal sewer system, calling for 18 miles of pipe, ranging in size from 6 to 14 ins. The plan is to construct the sewers in alleys; 49 flush tanks will be required.

BRIGGS, CAL.—The Richvale Townsite Co. is figuring on numerous improvements in Briggs. It will be sewered with a concrete sewer at an estimated cost of about $75,000.

MONROVIA, CAL.—The REINFORCED CONCRETE PIPE CO., Central Bldg., Los Angeles, has secured the contract for furnishing 11,000 ft. of 24-in. reinforced concrete pipe for the new outfall sewer at Monrovia.

*MONROVIA, CAL.—The Board of Trustees have awarded contract to R. C. LOWELL, 613 South Grand Ave., Los Angeles, for the construction of the municipal sewer system, at $85,744 for sewer, complete. Vitrified pipe will be used for all, except the 24-in., which will be of reinforced concrete. Quantities required: 118,600 ft. 6-in., 3,250 yds.; 10,000 ft. 8-in., 160 yds.; 65,000 ft. 10-in., 186 yds.; 3,160 ft. 12-in., 50 yds.; 1,200 ft. 14-in., 16 yds.; 4,000 ft. 16-in., 60 yds.; 9,700 ft. 24-in., 22 brick manholes; 67 flush tanks. Olmsted & Gillelen, Wright & Callender Bldg., Los Angeles, are the Engrs.

PASADENA, CAL.—City Engineer Van Ornum is preparing plans for a west side sewer which will be brought to a pumping plant at Columbia St., and the edge of the Arroyo Seco, the lowest spot in the district, and will there be pumped over the hill to the sewer at Columbia St. and Orange Grove Ave. From that point it will flow through the west side sewer system to the outfall sewer system at the Hotel Raymond.

SACRAMENTO, CAL.—Bids will be received by M. J. Desmond, City Clk., until Jan. 30 for reconstructing the main sewer in Third St., and installing a sewer in an alley at Second St.

SANTA MONICA, CAL.—See item under Miscellaneous Contracts-Amusement Structure.

GARBAGE DISPOSAL.

(**Denotes that this work is advertised in Engineering News.*)

BOSTON, MASS.—Bids will be received until Jan. 27 by the city for the removal of ashes in West Roxbury and East Boston districts. Louis K. Rourke is Supt. of Sts.

WATERTOWN, N. Y.—The Board of Health has awarded the contract to O. B. COLWELL for the collection of the city's garbage.

AKRON, OHIO.—The city is considering the construction of a garbage disposal plant. Estimated cost for American system, $20,000 to $30,000; for English system, $70,000 to $80,000.

CLEVELAND, OHIO.—Bids will be received at the office of the Secretary of the Board of Public Service until noon, Feb. 2, for exclusive right for picking on the following city dumps: East 79th St., between Kinsman Ave. and N. P. R. R.; end of Martin St., near Broadway; south end of East 40th St., near Croton Ave.; Baxter St., between East 65th and East 67th Sts.; West 48th St. and Walworth Run, near Train St.; West 55th St. and Walworth Run, near Lorain St.; Seymour Ave., near Fulton Road; south end of Clark Ave.; extreme south end of East 40th St. Specifications may be seen and blank proposals can be obtained at the office of the Superintendent of Street Cleaning.

FT. WAYNE, IND.—The contract for hauling the city garbage has been awarded to D. C. WILBURNE.

MARLIN, TEX.—The City Council is asking for bids for the construction of a garbage crematory here.

BERKELEY, CAL.—Plans are being considered by the City Council for the erection of a municipal incinerator on the site of the one which a private company has had under construction for the past year.

LOS ANGELES, CAL.—The city is considering the installation of an additional furnace at the garbage incinerating plant. Homer Hamlin is City Engr.

STREETS AND ROADS.

(**Denotes that this work is advertised in Engineering News.*)

BOSTON, MASS.—Bids will be received by the War Department until 1 p. m., Feb. 20, for constructing roads, walks, drains, etc., at Fort Andrews, Boston Harbor. Plans and specifications are on file at the office of the Chief Quartermaster. Capt. A. M. Miller, of Boston, Mass., is Const. Q. M.

*ALBANY, N. Y.—The State Highway Commission has indefinitely postponed the opening of bids for the construction of state highways. Bids were to have been opened on Jan. 9. John A. Bensel is State Engr. and Surv., Albany.

BUFFALO, N. Y.—The City Council has ordered that Abby St. be paved from New Abby to Edmunds St. with round-edge shale brick, Specification B, on concrete base, the width to be 30 ft. F. G. Ward is Comr. Pub. Wks.

BUFFALO, N. Y.—Bids will be received by Francis G. Ward, Comr. Pub. Wks., until Feb. 6, for paving Milton, Sanford and Krupp Sts., and repaving Elk and Sycamore Sts.

BUFFALO, N. Y.—Bids will be received by the Department of Public Works, Francis G. Ward, Comr., until 11 a. m., Jan. 26, for paving and otherwise improving various streets.

NEW YORK, N. Y.—We are officially advised that contracts for improving various streets in the Boro. The Bronx were awarded on Jan. 17, as follows: Contract No. 4, to L. J. MORAN, 562 Burnside Ave., New York, at $5,240; No. 5, to the BARBER ASPHALT PAVING CO., 30 Church St., New York, at $4,718; No. 6, to AMANNA & LYONS, 8 Van Cortlandt Ave., New York, at $3,078; No. 7, to the ALAMO CONSTRUCTION CO., 215 West 125th St., New York, at $12,739.

Bids will be received by the Dept. of Water Supply, Gas and Electricity, 21 Park Row, New York, until 2 p. m., Feb. 1, for furnishing material, repairing and restoring artificial stone sidewalks and curbing, and resetting natural stone curbing. Henry S. Thompson is Comr. Water Supply, Gas and Electricity.

Bids will be received by the President of the Boro. of Brooklyn, until 11 a. m., Feb. 1, for the following work: Regulating, grading, curbing and laying sidewalks on Bay Ridge Ave., from 13th Ave. to 15th Ave.; on Bowne St., from Van Brunt St. to Richards St.; on Cortelyou Road, from Gravesend Ave. to Ocean Parkway; on East 5th St., from 300 ft. north of Ave. F to Ditmas Ave. For regulating and paving with asphalt on a concrete foundation the roadway of East 5th St., from 300 ft. north of Ave. F to Ditmas Ave. For curbing and repaving with asphalt pavement on a concrete foundation the roadway of East New York Ave., from Pitkin Ave. to Douglass St. For regulating, grading and curbing Fuller Pl., from Windsor Pl. to Prospect Ave. For regulating and paving with asphalt on a concrete foundation the roadway of Gravesend Ave., from Ave. C to Foster Ave. For regulating, grading and curbing Howard Pl., from Windsor Pl. to Prospect Ave. For regulating, grading, curbing and laying sidewalks on Lott St., from Tilden Ave. to Butler St. For regulating and paving with asphalt on a concrete foundation the roadway of Lott St., from Tilden Ave. to Butler St. For regulating, grading, curbing and laying sidewalks on Powell St., from Dumont Ave. to Livonia Ave. For curbing and laying sidewalks on Prospect Pl., from Utica Ave. to Rochester Ave. For regulating, grading, curbing and laying sidewalks on Sterling Pl., from Rochester Ave. to Buffalo Ave; from Rochester Ave. to Utica Ave.; from Eastern Parkway Exetension to Howard Ave.; and from Eastern Parkway Extension to East New York Ave. For regulating and paving with asphalt on a concrete foundation the roadway of West 23d St., from Surf Ave. to its southerly end; also the roadway of 67th St., from 2d Ave. to 3d Ave. For regulating, grading, curbing and laying sidewalks on 76th St., from 1st Ave. to 2d Ave; from 12th Ave. to 13th Ave.; and 12th Ave., from 65th St. to Bay Ridge Ave. Alfred E. Steers is Pres. Boro. of Brooklyn.

SENECA FALLS, N. Y.—The city has engaged James W. Brennan, of Geneva, N. Y., to prepare plans for the paving on State and Bayard Sts., and to supervise all construction.

NEWARK, N. J.—The Board of Street and Water Commissioners, at its meeting of Jan. 19, started proceedings for the paving of seven streets with brick, granite and bitulithic, the total amount aggregating about $87,000. Bids will probably be received about the first of March. M. R. Sherrerd is City Engr.

PATERSON, N. J.—We are officially advised that plans are being prepared by Garwood Ferguson, County Engr., for the construction of state roads in Passaic County.

ERIE, PA.—The city will soon receive bids for the construction of an asphalt repair plant, at an estimated cost of $11,000. B. C. Briggs is City Engr.

HARRISBURG, PA.—The following bids were received on Jan. 16, by W. W. Caldwell, City Highway Comr., for grading Paxton St.: United Ice & Coal Co., $7,758; Stucker Bros. Construction Co., $7,230; Jos. L. Shearer, Jr., $8,950. For grading Front St.; United Ice & Coal Co., $14,800; Jos. L. Shearer, Jr., $14,130. M. B. Cowden is City Engr.

BALTIMORE, MD.—The Board of Awards has approved the specifications prepared by B. T. Fendall, City Engr., for grading and paving with cobble stones portions of Eutaw, Hamburg and Howard Sts.

PENSACOLA, FLA.—The city will receive bids in about 60 days for street improvements, to cost about $450,000. L. E. Thornton is City Engr., and L. G. Aymard, City Clk.

MOBILE, ALA.—Bids will be received by the Board of Public Works, Wright Smith, Ch. Engr., until Feb. 16, for the construction of 11,400 sq. yds. cement street paving, and 8,400 lin. ft. curb.

MONTGOMERY, ALA.—Bids will be received until noon, Feb. 6, for paving Mobile St., from Goldthwaite St. to Mildred St. C. J. Fay is Acting Treasurer.

TUSCALOOSA, ALA.—Bids will be received until Feb. 2 for the construction of 19,000 sq. yds. of brick, wood block, sheet asphalt or bitulithic pavement. W. B. Nicol is City Engr.

POINTE A LA HACHE, LA.—The city is considering the construction of a shell road from St. Bernard to Point a la Hache, a distance of 32 miles. The estimated cost is $80,000.

CROWLEY, LA.—Bids will be received until 8 p. m., Feb. 7, for constructing approximately 150,000 sq. yds. of sidewalks on various streets and avenues. R. J. Boudreaux is City Clk.

NEWPORT, TENN.—Bids will be received until 2 p. m., Jan. 27, for grading about 18 miles and macadamizing about 35 miles in Cocke County. George W. Gorrell is Secy. of the County Comrs.

AKRON, OHIO.—Ordinances have been adopted by the City Council providing for the improvement of Edgewood Ave., from South Maple St. to Wooster Ave.; Maiden Lane alley, from State St. to Chestnut St.; Balch St., from Aqueduct St. to Maple St.; Euclid Ave., from Edgewood Ave. to a point 300 ft. west of Mallison Ave.; Lake St., from Lake Side Ave. to a point 105 ft. east of Celina Ave.; Park Ave., from Edison Ave. to Grace Ave.; Grace Ave., from Park Ave. to Long St.; Gale St., from Crosby St. to Exchange St.; Mill St., from Howard St. to Summit St.; and to establish new grades on Heintz St. and to alter the grade of Washington St. D. T. Horter is City Clk.

ASHTABULA, OHIO.—A re[illegible]tion has been passed to improve Pros[illegible] from West St. to the westerly city li[illegible] y grading, draining, curbing and pa[illegible]th vitrified block on a concrete foun[illegible] Frank W. Wagner is City Clk.

BARNESVILLE, OHIO.—The [illegible] Council has adopted a resolution for [illegible] Lincoln and Mulberry Sts. J. H. Che[illegible] Mayor.

CLEVELAND, OHIO.—Bids [illegible] be received at the office of the Dir[illegible] Public Service, Ira O. Hoffman, Secy.[illegible] noon, Feb. 3, for grading, draining [illegible] and paving several of the city stre[illegible]

CLEVELAND, OHIO.—Res[illegible]s have been adopted by the City Cou[illegible] for grading, draining, paving and i[illegible] the following streets: Olivet Ave., [illegible] 105th St. to Parkwood Drive; Rear [illegible] from 14th St. to 19th St.; Koch Co[illegible] from 8th St. to 68th St.; 30th St., from [illegible] ke Ave. to Ruby Ave. R. Y. McCray is [illegible] Clk.

CLEVELAND, OHIO.—Bids wi[illegible] received by the Board of Commissioners [illegible] yahoga County, J. F. Goldenbogen, C[illegible] until 11 a. m., Feb 11, for grading [illegible]tion of Broadview road No. 3, in Bre[illegible]ille and Strongsville Townships.

COLUMBUS, OHIO.—See [illegible] under Bridges.

The contract for paving Mou[illegible] St. has been awarded to A. G. PUGH, o[illegible]umbus, at $18,811. Athens block with a[illegible]lt filler is to be used.

DAYTON, OHIO.—Plans and s[illegible]cations have been completed for pavi[illegible] Huffman Ave., from Third to Overlook A[illegible] a distance of more than two miles. Th[illegible]imated cost is $85,000.

HAMILTON, OHIO.—Bids will [illegible] be received at the office of the County Commissioners for the improvement of two miles of the Venice Road in Butler County.

KENTON, OHIO.—Bids will be received until Jan. 30 by the Board of County Commissioners of Hardin County for macadamizing, graveling, grading and draining twelve pikes. The aggregate length is 12[illegible] miles.

LAKEWOOD, OHIO.—We are officially advised that the contract for laying 2,300 sq. yds. of brick paving was awarded on Jan. 16 to W. S. PACE, 11,207 Clifton Boulevard, Lakewood. The contract price was 15 cts. per ft.

MARYSVILLE, OHIO.—The city has sold street improvement bonds to the amount of $23,000. J. C. Kennedy is Village Engr.

MASSILLON, OHIO.—Preliminary steps have been taken toward paving portions of North Erie, Duncan, Cherry, North High and North Mill Sts. Noted on Dec. 29.

POMEROY, OHIO.—The City Engineer has been instructed to prepare plans and specifications for paving Front St. for a distance of 5,900 ft. The estimated cost is $15,000.

URBANA, OHIO.—The contract for building one mile of stone road in Champaign County was awarded on Jan. 14 to H. B. STEVENS, of Mechanicsburg, Ohio, at $7,363. The other bidders were: E. P. Patrick, of Mechanicsburg, $7,700; T. W. Hill, of Bellefontaine, $7,675; and H. T. Wilson, of Zenia, $7,647.

BLOOMFIELD, IND.—Bids will be received until Feb. 1 by the County Commissioners of Greene County for macadamizing the W. W. Clogston Road in Washington Township. Caswell H. Jennings is County Audr.

BRAZIL, IND.—Bids will be received by the Board of Commissioners of Clay County until 11.30 a. m., Feb. 7, for highway improvement in Van Buren Township. E. A. Staggs is County Audr.

FOWLER, IND.—Bids will be received by the Board of Commissioners of Benton County until 1 p. m., Feb. 6, for the construction of a free stone road, in the town of Ambia. Lemuel Shipman is County Audr.

GREENSBURG, IND.—The Commissioners of Decatur County will receive bids until Feb. 6 for constructing a macadamized street, 8,433 ft. in length, in the city of Greensburg. The street is to be paved with vitrified brick, according to the plans on file with Frank E. Ryan, County Audr.

INDIANAPOLIS, IND.—Bids will be received by the Department of Public Works, C. A. Schrader, Pres., until 10 a. m., Feb. 3, for grading, curbing, paving and otherwise improving Sanborn St., from New York St. to Owosso Ave.

LAFAYETTE, IND.—The Commissioners of Tippecanoe County will soon receive bids for the construction of a gravel road in Wabash Township. George W. Baxter is County Audr.

RUSHVILLE, IND.—The Commissioners of Rush County will soon receive bids for constructing a gravel road between Ripley and Center Towships. Jesse M. Stone is County Audr.

TERRE HAUTE, IND.—Bids will be received until Jan. 28 by the County Commissioners of Vigo County for constructing a gravel road in Sugar Township at an estimated cost of $13,000. N. G. Wallace is County Audr.

GRAND HAVEN, MICH.—Bids will be received by William Wilds, City Clk., until 7.30 p. m., Jan. 30, for paving and otherwise improving Sheldon and Slayton Sts. Plans and specifications are on file at the office of the Riggs & Sherman Co., Engrs., The Nasby, Toledo, Ohio.

HANCOCK, MICH.—Bids will be received until Feb. 1 for constructing approximately four miles of macadam road in Houghton County.

L'ANSE, MICH.—L'Anse Township has voted to issue bonds for $23,000 to build a road connecting the iron and copper countries.

JOLIET, ILL.—The Board of Local Improvements has adopted a resolution for the improvement of North Hickory St., from Spring St. to Marble St., a distance of a little more than half a mile, by the con-

struction of a bituminous macadam pavement, at an ...mated cost of $16,893. Address the C... Clerk.

MOLINE ...L.—Bids will be received by the Board ... Local Improvements, Clark G. Anderson, ..., until 10 a. m., Jan. 27, for improving ...portion of 20th St. Specifications are ... file at the office of the City Engineer.

APPLE... WIS.—Bids will be received by the ... of Public Works until Jan. 30 for the ...ruction of a reinforced-concrete walk on ...ge Ave. E. K. Williams is City Clk.

CEDA... APIDS, IOWA.—Bids will be received ... city until 10 a. m., Feb. 1, for paving ...ous streets. L. J. Storey is City Clk.

KAN... CITY, MO.—Bids will be received by the ...rd of Public Works until Jan. 26 for pa... various streets with asphalt. P. R. St... is Secy. Bd. of Pub. Wks.

HIL...RO, TEX.—The City Council will soon ...ve bids for paving the public squa... the streets running into it. Bonds have ...dy been issued and sold for this purp... and it is expected that work will comm... in the near future.

HIL...ORO, TEX.—Several streets will be im...ved under the $100,000 bond issue recen... voted.

HO...ON, TEX.—The city is considering the ...truction of a boulevard and park syste... from the Houston Heights Boulevard along ...hite Oak bayou to the Southern Pacific ...spital, in the Fifth Ward, to connect with ...ntgomery Ave. and the new Main St. v...uct. Mayor Rice is interested in the proj... and estimates the cost at $150,000.

TU...SA, OKLA.—Bids will be received by the ...ard of Commissioners, until 9.30 a. m., Jan. ..., for paving and otherwise improving sever... streets. Plans and specifications are on f... at the office of the City Engineer. E. B. Cline is City Audr.

TACOMA, WASH.—The city has sold bonds for $100,000 for road and bridge purposes. H. J. McGregor is Comr. Pub. Wks.

WENATCHEE, WASH.—Bids will be received by S. R. Sumner, City Clk., until Jan. 31 for grading, surfacing with gravel, constructing concrete curb and sidewalk, wood gutters and wood crosswalks on Okanogan Ave., for a distance of 4,400 ft.

SILVERTON, ORE.—Bids will soon be received for the construction of a macadam road on the line known as the Silverton-Marquam Road. The road will be about five miles in length.

CHICO, CAL.—The contract for macadamizing six miles of streets in this city has been awarded to the CHICO CONSTRUCTION CO., at $25,000.

CORONA, CAL. — ENOS BRUCKMAN & KROONEN were awarded the contract, at $20,282, for improving Rimpan St., their bid being 36 cts. per lin. ft. for grading, 7¾ cts. per sq. ft. for paving, 3.14 cts. per lin. ft. for curb, 14¾ cts. per sq. ft. for gutter, 75 cts. per lin. ft, culverts, $1 per lin. ft. 24-in. culverts. The same firm also submitted the lowest bid for improving Olive St.

EL CENTRO, CAL.—We are officially advised that the city contemplates paving certain portions of Main, Fifth and Sixth Sts., a total of approximately 35,000 sq. yds. H. B. Pearson, Jr., is City Engr.

FRESNO, CAL. — The contract for constructing the Sand Creek Road has been awarded to L. S. REED, the lowest bidder, at $24,900.

LOS ANGELES, CAL.—Bids have been received as follows for improving portions of Huntington Drive: F. F. Prendergast, grading and culverts, complete, Section 1, $8,000; Section 2, $2,900; oil macadam paving, $1.33 per ton; Class A concrete, $15; Class C concrete, $14. Oil Macadam Paving Co., $9,204; $3,545; $1.40; $18; $15. Pete Walker, of Los Angeles, $7,204; $2,184; $1.50; $14; $13. H. B. Kentry, $9,063; $2,400; $1.40; $12; $11. H. J. Lelande is City Clk.

PORTERVILLE, CAL. — The WORSWICK STREET PAVING CO. has secured the contract to pave Mill St., from Main St. to the city limits, with Class B paving. The bid was: Paving, 5 cts. per sq. in.; concrete gutters, 27 cts.; sheet iron culverts, 26 cts. per lin. ft.

RICHMOND, CAL.—The city is planning the paving of McDonald Ave., from 23d St. to San Pablo Ave., a distance of about 25 blocks. I. R. Vaughn is City Clk.

*WINNIPEG, MAN.—Bids will be received by the Board of Control, M. Peterson, Secy., until 11 a. m., Mar. 1, for supplying from 1,000 to 1,500 tons of asphalt for street paving.

MANUFACTURING PLANTS.

*(*Denotes that this work is advertised in Engineering News.)*

AUGUSTA, ME.—The Boston Metal Ceiling & Mfg. Co. has been organized with a capital stock of $150,000. Clarence E. Eaton is Pres.

WINSLOW, ME.—The Winslow Mfg. Co. has been organized here and will establish a factory for the manufacture of cloths of part shoddy material. The proposed stock issue is $10,000, and the promoters are: Edward Chase, of Winslow; A. W. Lord, of Vassalboro, and Dana P. Foster, of Waterville. Mr. Chase is Pres. and Treas., and Mr. Foster is Clerk and Attorney.

NORTH ADAMS, MASS.—The Hoosac Cotton Mills plans to erect a weave shed, in the spring, in connection with the Beaver Mills, which were recently purchased from the Arnold Print Works.

SPRINGFIELD, MASS.—The Hampden Mfg. Co. plans the construction of a manufactory for cotton, silk, woolen, flax and all fibrous goods. Ivan J. Amo is Pres., and William B. McCourtie, Treas. The capital is $25,000.

TAUNTON, MASS.—The Old Colony Mfg. Corporation will erect a factory for the manufacture of cotton, linen, silk and worsted goods. Henry M. Lovering is Pres.

TIVERTON (North Tiverton post-office), R. I.—A plant for the manufacture of fiber cotton goods is planned here by William J. Dunn and Frank H. Towne, both of Fall River, Mass.

PLAINVILLE, CONN.—The Trumbull Electric Mfg. Co. is about to make additions to its Plainville factories. The main buildings are to be 40 × 106 ft. and 63 × 72 ft., four stories high, of brick, mill construction and there are to be a 4-story stair and elevator tower and a vault of the same height, a 1-story boiler house, 43 × 44 ft., a 2-story engine room building, 25 × 40 ft., and a 100-ft. radial brick stack. Work will be begun next month.

BUFFALO, N. Y.—The Star Laundry Co. will erect an addition, 90 × 100 ft., to its plant at Master St. and Northland Ave.

ILION, N. Y.—Plans have been completed for enlarging the plant of the Remington Typewriter Co. here, it is stated and construction will soon be started.

LOCKPORT, N. Y.—The Lockport Textile Co., plans to double the capacity of its plant, by erecting a mill twice the size of the present one, according to reports.

ROCHESTER, N. Y.—The following contracts have been awarded for constructing a 3-story factory on Leighton St. for the R. T. French Co., Furnace St.: Masonry,' to PETER HAUCK, 437 Main St., East; carpentry, to FRANK J. SAUER, 31 South Water St.; steel work, to the ROCHESTER STRUCTURAL STEEL CO., 666 Plymouth Ave. The plans were prepared by Foote & Headley, Archs., Cutler Bldg. Estimated cost, $120,000.

The contract to erect a 2-story addition to the creamery at Hudson Ave. and Woodbury St., has been let to WILLIAM F. MAAS, 124 Railroad St. The City Dairy Co., on premises, is the owner and G. F. Crump, 200 South Ave., the Arch. Cost, $12,000.

JERSEY CITY, N. J.—Plans are being prepared by William A. Boring, Arch., 76 Montgomery St., for a 2-story brick factory, 75 × 90 ft., to be constructed at Johnson and Halliday Sts., for the Wright Piano Co., 485 Greenwich St., New York.

PHILADELPHIA, PA.—Otto C. Wolff, Arch., 1025 Arch St., is preparing plans for a 4-story brewing plant for the Hess Brewing Co., to be built on the site now occupied by the plant of the Consumers' Brewing Co., on the east side of Fourth St., north of Brown. The building will measure, 41.9 × 143 ft., with a storage building in the rear. The Hess Brewing Co., recently purchased the plant of the Consumers' Brewing Co. Cost, $20,000.

PHILADELPHIA, PA. — MATTHEW SCHMIDT will erect for the Bergner & Engel Brewing Co., a 1-story boiler house, to cost $27,000.

BALTIMORE, MD.—The Newark Gypsum Block Co., will erect a factory at the southeast corner of Appleton and Wilson Sts., near Fulton Station, to be used for the manufacture and storage of gypsum blocks. It will be one story high, of corrugated iron and fireproof and will have a frontage of 50 ft. by a depth of 60 ft. It will be built under the direction of W. S. Isaacs, the Supt.

The W. and J. Knox Net & Twine Co., will build an addition to its plant at Johnson and Barney Sts., South Baltimore. The company has already completed private plans, which are now being submitted to local contractors and builders for estimates. A 2-story brick and concrete structure will be erected which will have a frontage of 45 ft. with a depth of 66 ft.

The American Tobacco Co., Charles and Barre Sts., is having plans prepared by Theodore W. Pietsch, American Bldg., for a tobacco factory to be erected on Boston St. The building will be used for the manufacture of the tin packages which are used by the Company for the encasing of the products of their plants throughout the country. It will cover an area of ground extending approximately 300 ft. on Boston St., and the river front by 400 ft. in depth, and the combined floor surfaces will aggregate an area of more than six acres.

BALTIMORE, MD.—The Fayette Mfg. Co., E. T. Peppler, Pres., 1202 Harford Ave., has increased its capital stock from $5,000 to $10,000 and will enlarge the factory.

The Maryland Lumber Co., 222 Forrest St., has purchased a site at 127-133 East St. and plans to erect a fireproof addition to its plant. Plans are now being prepared.

The Pure Food Ice Cream Co., recently incorporated by Jerome B. Waldeck, 423 Scott St., Charles A. Waldeck and Annesley E. Hodson, Jr., will establish an ice cream plant.

The R. Milton Norris Co., 518 West Baltimore St., incorporated with $100,000 capital stock by Herman T. W. Heimiller, John Roland Hunt, J. Carroll Hammen and William H. Klinefelter, will continue the established plant, and make improvements.

HAVRE DE GRACE, MD.—The Deland Mining & Milling Co. contemplates the erection of an addition to its plant.

PORTSMOUTH, VA.—The Portsmouth Cotton Oil Refining Corporation has awarded a contract to the MYERS-TURPIN CONSTRUCTION CO., of Norfolk, for the erection of a refinery. It will be fireproof, of cement, brick and structural steel. The cost of the machinery and building will be $70,000. Herman Aspergren is Engr.-in-Charge.

MOUNDSVILLE, W. VA.—The contract for erecting a factory for the Brake Shoe Co. has been awarded to the BATSON & BURTON CO., at $15,000.

SALISBURY, N. C.—According to reports, it is the intention of the Directors of the Vance Cotton Mill to build an additional mill, thereby doubling the capacity of the present plant. The capital stock is $300,000.

The Hambley Mfg. Co. is planning to begin the construction of its plant, and will probably install 50 broad looms to begin with. It will operate by electricity and manufacture mercerized damask. This company was reported incorporated previously with a capital stock of $125,000. C. C. Adams, is Pres. and G. F. Hambley, Secy.-Treas.

COLUMBUS, GA.—J. T. Knight & Sons, are planning to erect a bagging and tie plant on Bay St. Construction work will soon start. The estimated cost is $75,000.

LAGRANGE, GA.—The Dunson Mill has engaged J. E. Sirrine of Greenville, S. C., to prepare plans and specifications for its plant. This company was incorporated several months ago with an authorized capital stock of $1,000,000. W. S. Dunson will be Superintendent of the mill.

MONTICELLO, GA.—The Castle Cotton Mills Co., has been organized at Monticello, with a capital stock of $1,000,000. William T. Lang is the promoter. Work will be started at once on the erection of a plant, it is reported.

THOMASTON, GA.—A company is being organized by F. M. Garner, A. J. Nelson and C. W. Reid, for the purpose of establishing an ice plant with a daily capacity of twelve tons.

RAGLAND, ALA.—The Atlantic & Gulf Portland Cement Co., will, it is reported expend $250,000 to build a plant for manufacturing terra-cotta for piping and ornamental purposes.

BARNETT, MISS.—A lace mill at or near this town is contemplated by Samuel Stevenson, of Barnett.

CHATTANOOGA, TENN.—Plans have been completed by Adams & Alsup, Archs., James Bldg., and bids will soon be received for the erection of a 1-story brick factory, 125 × 221 ft., to replace the one destroyed by fire at Carter and Main Sts. The Ross-Meehan Co. is the owner.

MEMPHIS, TENN.—We are officially advised that bids will be received about Feb. 1, for the construction of a keg cooperage plant, 60 × 160 ft., and two stories high. W. L. Fay, of the Dixie Cooperage Co., is the owner. Noted on Jan. 12.

SHELBYVILLE, KY.—A refrigerating and ice plant is contemplated here by Grover Todd.

CYNTHIANA, IND.—The Yost Brick, Tile & Stone Co., recently incorporated with a capital of $25,000, is preparing to construct and equip a factory to manufacture clay, shale and stone products. C. T. Yost is Pres.

DALEVILLE, IND.—The Daleville Glass Co. is preparing to ask for bids for the erection of a factory.

DETROIT, MICH.—The Gray-Hawley Mfg. Co., has purchased a site, 88 × 200 ft., at the corner of Jefferson and Elmwood Aves., and a factory will be erected as soon as possible.

Pollmar & Ropes, Cleland Bldg., will take figures soon on a 3-story and basement factory, 40 × 100 ft., to be located on Gratiot Ave., for Fred. Rosenberger, care of the architect. It is to be constructed of press and stock brick, bedford stone, with a composition roof, galvanized iron skylights, cornice and structural iron. Cost, $25,000.

The Miller-Seldon Electric Co., 55 Park Pl., has purchased a site, 30 × 100 ft., adjoining its present factory, and announces that it will erect a 3-story and basement addition soon.

The Voight Brewing Co., H. Zimmerman, Supt., 203 Grand River Ave., has awarded the general contract for the addition, 60 × 90 ft., to be added to present Brewery, to MAX BARTHOLOMAEI SON & CO., 466 Warren Ave. East.

GRAND RAPIDS, MICH.—Baldwin, Tutthill & Bolton, 103 Sixth St., are having plans prepared for two additions—one two stories high and 50 × 70 ft. and the other one story high and 125 × 160 ft. They will be fireproof and of brick construction. Cost, $30,000.

KALAMAZOO, MICH.—The King Paper Mills of Kalamazoo, which were damaged to the extent of $50,000, by fire on Jan. 18, will be rebuilt in the near future.

BELLEVILLE, ILL.—Plans have been completed by M. P. McArdle, Arch., Chemical Bldg., St. Louis, Mo., for the construction of a factory, one and two stories high, 585 × 80 ft., for the Joan D'Arc Mfg. Co., Chemical Bldg., St. Louis.

CHICAGO, ILL.—The contract for the masonry work for a factory at 2226 La Salle St., for the Acme Packing Co., has been awarded to C. B. JOHNSON, 6130 St. Lawrence Ave. It will be three stories high and 50 × 123 ft. Cost, $35,000. William H. Pruyn, Jr., & Co., 44th St. and Grand Boulevard.

SUPERIOR, WIS.—Harry E. Speakes, formerly Manager of the Superior Mfg. Co., dealers in builders' supplies and salt, plans to establish a similar plant. A company is being organized for this purpose of which Mr. Speakes will be Pres.

ST. LOUIS, MO.—The first oil cloth factory to be established at St. Louis, is now being planned by William Nisbett, formerly of Columbus, Ohio. He is organizing the National Oil Cloth Co. to own and operate the plant and the company will be incorporated soon with a capital stock of $75,000, of which there has been $45,000 subscribed. Arrangements have been made to lease the plant and buildings formerly owned by the Seed Dry Plate Co., and the oil cloth machinery will be installed therein. The machinery will be for a daily capacity of 24,000 yds. of oil cloth in 2,000 pieces, each twelve yds. long. The plant leased includes a 234 × 125 ft. structure, a machine shop, an engine and boiler house with boilers in position, three warehouses, each 55 × 60 ft., several other structures.

AVALON, TEX.—J. M. Powell & Son, of this place, will erect a cotton gin here, to cost about $15,000, to replace the plant which was recently destroyed by fire.

CLEBURNE, TEX.—The Gulf, Colorado & Santa Fe R. R. Co. will install new machinery and make other improvements to its shops at this place. It will also install an electric light and power plant. W. F. Buck Supt. of Motive Power, with headquarters at Galveston, has charge of the proposed work.

EL PASO, TEX.—The Texas Fiber Machine Co. will erect a factory at this place, for the manufacture of machines for converting certain species of the cactus plant into fiber.

GOLIAD, TEX.—Otto Foster will erect a broom manufacturing plant at this place, it is stated.

McALLEN, TEX.—The McAllen Gin Co., recently organized with a capital stock of $10,000, will erect a cotton gin here. The incorporators are: Scott Cawthon, W. O. Bryan and W. E. Stewart.

PLAINVIEW, TEX.—C. R. Ball is interested in a plan to establish a plant for manufacturing subirrigation tile.

PROVIDENCE CITY, TEX.—The Provident Land Co. will erect a fig preserving plant here. The same company is interested in the proposed installation of an electric light plant.

SAN ANGELO, TEX.—The Paul Garrett Milling Co., plans to rebuild the plant that was destroyed by fire. It will be four stories high, of reinforced concrete construction. The cost, including machinery and a grain elevator, will be about $40,000.

SAN ANTONIO, TEX.—The plant of the Alamo Iron Works here will be remodeled and enlarged. Several buildings will be erected, a blacksmith shop installed, and the entire plant equipped with new machinery. The output of the plant will be increased about 50% by the additions that are now being planned. Eugene Holmgreen is Secy.-Treas.

SAN BENITO, TEX.—A pre-cooling plant is contemplated here by the "Frisco System" (St. Louis & San Francisco R. R.), for handling perishable garden products. According to reports, if this is successful, it is the intention of the company to establish several of these plants along its lines in the lower Rio Grande & Gulf coast region. B. F. Yoakum, of New York, is Chn. of the Executive Committee. Estimated cost, $50,000.

The San Benito Sugar Mfg. Co. will erect a sugar mill here, to cost $400,000. S. A. Robertson, of San Benito, is at the head of the project.

PORTALES, N. MEX.—The plans of the American Beet Sugar Co. to erect a beet sugar factory here are progressing. It is stated that farmers within a radius of 50 miles have signed contracts for growing more than 50,000 acres of sugar beets for the proposed factory. The company is also arranging to install an electric-power plant and to construct an electric railway between Portales and Taiban, N. Mex., 50 miles, traversing the center of the proposed sugar beet district. This road will do both a freight and passenger business. The American Beet Sugar Co. will dig the wells for the farmers, install the irrigation pumping plants. The consummation of this project will create a demand for irrigation pumping machinery.

TOMBSTONE, ARIZ.—M. M. Mills is promoting the installation of a plant for quarrying marble at a bed of that material here.

BEAUMONT, CAL.—Thomas J. Overstreet and associates contemplate the erection of a factory here, for the manufacture of brooms.

LONGBEACH, CAL.—The Southern California Edison Co. plans to construct a plant in the harbor district to cost $150,000. It is reported that the F. O. ENGSTRUM CO., 451 Colyton Ave., Los Angeles, has been awarded the contract.

LOS ANGELES, CAL.—The Pacific Sash Weight Foundry Co. has been incorporated here with a capital stock of $25,000 by E. C. Wilson, J. W. Begg and F. A. Buchanan.

The Southwestern Sugar Co. has been incorporated here with a capital stock of $1,000,000. The incorporators are: D. Howarth, M. B. Jones, G. A. Bogen, R. S. Bulla, W. D. Flory, H. Greeg and W. E. Evans. The company has purchased an 80-acre factory site near Perris on the Santa Fe R. R., upon which they will erect a 500-ton sugar factory, to cost $500,000. The buildings, plans for which are in preparation, will probably be of brick and steel. Electric power will be used, with an individual motor for each machine, thereby avoiding the use of pulleys, shafts and transmission. Construction is to begin in June.

SAN BERNARDINO, CAL.—The MYZELLE & IMHOFF CO. has been awarded the contract, at $12,000, for the erection of a concrete "mixing house," 140 × 200 ft., being the first of a group of buildings to be erected here for the General Fertilizing Association of Los Angeles. The plant will employ 40 men. T. A. Blakeley, of San Bernardino, is at the head of the concern.

THREE RIVERS, QUE.—The Quebec Pulp & Paper Co., Ltd., has been incorporated with a capital of $15,000,000, and plans to erect pulp and paper mills on the north shore of St. Lawrence River near Three Rivers. Rudolph E. Forget, of Montreal, is interested.

WELLAND, ONT.—The Canadian Automatic Transportation Co. will build a*$10,000 plant here, employing 50 hands.

WELLAND, ONT.—The Automatic Transportation Co., of Buffalo, N. Y., has organized a Canadian company and will locate its works here, on a site adjoining the plant

of the Canadian Iron & Steel Co., where a 2-story brick and concrete factory building will be erected.

WOODSTOCK, ONT.—An agreement has been executed with the city by the Ken Knit Co., who will, in return for a loan of $20,000 from the city, establish a factory here employing 75 hands to commence. K. Harvey, of the Oxford Knitting Co., of Woodstock, is interested.

MEDICINE HAT, ALTA.—The Alberta Linseed Oil Co. will erect a refining plant, it is stated.

MISCELLANEOUS CONTRACTS.

(*Denotes that this work is advertised in Engineering News.)

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

STRUCTURAL STEEL.—Boston, Mass.—The contract for 500 tons of structural steel for the fire department repair shop has been awarded to the EASTERN STEEL CO, 110 State St., Boston.

DREDGING.—Hartford, Conn.—The improvement of the Connecticut River up to Hartford by dredging and the construction of dikes and retaining walls at a cost of $177,000, with $15,000 for maintenance annually until the work is completed and $7,000 thereafter, has been recommended to Congress. The survey was made by Lt.-Col. Harry Taylor, Corps Engrs., U. S. A., New London, Conn. It is proposed to dredge a channel 300 ft. wide, 15 ft. deep at mean low water, through the bar, and 100 ft. wide and 12 ft. deep at mean low water from there on to Hartford.

*DREDGING.—Stamford, Conn.—Bids were received by Lt.-Col. Harry Taylor, Corps Engrs., U. S. A., New London, Conn., on Jan. 21, for dredging in Stamford Harbor: John H. Gerrish, 25.2 cts., $15,120; Maritime Dredging Co., 25 cts., $15,000; John P. Randerson, 34 cts., $20,400. The prices bid on estimated quantity of 60,000 cu. yds.

STATUE.—Waterbury, Conn.—A bronze statue of Benjamin Franklin will be erected on "The Green" and presetned to the city. The statue will have a granite base. Estimated cost, $15,000. Address Edwin S. Hunt, Citizens' Bank Bldg., Waterbury.

*STOREHOUSE.—Fort H. G. Wright (New London, Conn., post-office).—N. Y.—Bids will be received until 11 a. m., Feb. 18, by Capt. F. T. Arnold, Constr. Q. M., U. S. A., New London, Conn., for the construction of a brick quartermaster's and ordnance storehouse here, and installing electric wiring and fixtures therein.

CAISSON.—New York, N. Y.—Bids were received as follows on Jan. 21, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the construction of a caisson for dry dock No. 4, at the New York navy yard.: New York Shipbuilding Co., Camden, N. J., $99,875; Snare & Triest Co., 143 Liberty St., New York, $116,700; Maryland Steel Co., Sparrow's Point, Md., $123,600; Newport News Shipbuilding & Dry Dock Co., Newport News, Va., $111,000; Penn Bridge Co., Bond Bldg., Washington, $112,900.

COLD STORAGE BUILDING.—Albany, N. Y.—The bids received on Jan. 18th by the State Commission in Lunacy for the renovation of the cold storage building, insulation and equipment, at the St. Lawrence State Hospital, Ogdensburg, N. Y., were: H. W. Johns-Manville Co., Albany, N. Y., $7,814; J. A. West, Ogdensburg, $8,974; Pooler & Sparrowhawk, Ogdensburg, $9,853; Westerberg & Williams, New York, $14,980; Shipley Construction & Supply Co., New York, $16,250. F. B. Ware is State Arch.

DREDGING.—New York, N. Y.—Bids will be received by Calvin Tomkins, Comr. of Docks, noon, Jan. 31, for Contract No. 1263, for furnishing all the labor and materials required for dredging in the Boros. of Manhattan, Brooklyn, Queens, The Bronx and Richmond.

SHED, OIL HOUSE, ETC.—Bids will be received by George Cromwell, Pres. Boro. Richmond, until noon, Jan. 31, for furnishing all the materials and labor necessary for the erection and completion of shed, oil house and fence.

GRADE CROSSING ELIMINATION.—Islip, N. Y.—The Public Service Commission, Second District, has ordered the elimination of the grade crossing of the Long Island R. R. Co., known as Chestnut Ave., in the town of Islip, Suffolk County.

HARBOR IMPROVEMENT. — Mamaroneck, N. Y.—J. M. Dickinson, Secretary of War, has recommended to Congress the further improvement of Mamaroneck Harbor, by the excavation of a channel 7 ft. deep at mean low water and 80 ft. wide, at an estimated cost of $29,500. Col. W. M. Black, Corps Engrs., U. S. A., New York, has stated that such a channel could be formed by utilizing the recent one for a distance of 500 ft. below the village wharves, at which point the old channel could be abandoned and the new one carried with flatter banks across the point of marshland northeast of Harbor Island, intersecting and crossing the present channel 200 ft. northeast of the old steamboat wharf, continuing in a southerly direction between the mainland on the east shore of the harbor and Grassy Knoll near its center, again entering, by easy courses, the present channel at the inlet. From this point the channel could continue in a southerly direction until a proper depth is reached in the outer bay. This channel should be seven feet deep at mean low water and 80 ft. wide, except at its bends and near its head, where this width should be somewhat exceeded. A turning basin could be formed at the head of the contemplated channel, with a short cross channel extending about 300 ft. to the eastward, immediately opposite the upper wharves, and the main channel could be carried to the Boston Post Road bridge.

PICKET FENCE.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., Feb. 2, for furnishing all labor and materials necessary to construct and complete wrought-iron picket fence around Amersfort Park, Boro. Brooklyn, together with all the work incidental thereto; for all labor and materials required to construct and complete wrought-iron picket fence and widen embankment around Kings Park, Boro. Queens, together with all the work incidental thereto; for furnishing all labor and materials necessary to construct and complete wrought-iron picket fence around Bushwick Park, Boro. Brooklyn, together with all the work incidental thereto; for furnishing all labor and materials necessary to construct and complete wrought-iron picket fence, around Fulton Park, Boro. Brooklyn, together with all the work incidental thereto. Charles B. Stover is Pres.

*REVOLVER RANGES, ETC.—Blauvelt, N. Y.—Bids for the construction of revolver ranges, magazine pump house and water supply work; property line fence; steel backstops and ice house at the New York State Rifle Range, Blauvelt, will be received by the State Board of Armory Commissioners, Capitol, Albany, N. Y., until noon, Feb. 7. Drawings and specifications may be consulted, and blank forms of proposal obtained at the office of the Superintendent of the State Rifle Range, Blauvelt, and at the office of F. B. Ware, State Arch., Albany. Complete sets of plans and specifications will be furnished prospective bidders upon reasonable notice to and in the discretion of the State Architect. F. A. McNeely is Secy.

STREET VAULT.—New York, N. Y.—P. J. BRENNAN & SON, 624 Madison Ave., New York, have been awarded the general contract to construct a street vault, concrete and steel, 242 × 25 ft., along the north side of East 38th St., corner First Ave., for the New York Edison Co., 55 Duane St. Estimated cost, $15,000.

TIMBER.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., Feb. 2, for furnishing and delivering timber (No. 1, 1911) for parks, Boro The Bronx.

MEADOW RECLAMATION, ETC.—Newark, N. J.—The Board of Public Works has adopted a resolution, it is reported, requesting the Controller to co-operate with the Mayor and issue $100,000 for meadow reclamation and the development of the public dock and shipping facilities. M. R. Sherrard is Ch. Engr. Bd.

PIER.—Holly Beach, N. J.—A large ocean pier will be constructed on the beach front at the foot of Montgomery Ave. It will be about 1,000 ft. long.

SHIP CANAL.—Trenton, N. J.—The Deeper Waterways Commission will ask the Legislature at its coming session to appropriate $500,000 for the purchase of property for a right of way for a ship canal across the state. United States Army engineers have drawn surveys for the canal, which, according to present plans, is to extend from New York Bay to deep water in the Delaware River, near Bordentown, and will form a part of the chain of canals from Maine to Florida. The resolution proposes that the State shall, by purchase or condemnation, acquire the right of way for the canal, which right of way shall be mapped out by the Federal authorities who shall construct and maintain the canal, providing that they shall construct and maintain it free to the commerce of the world, without any toll whatever for the passage of vessels or freight. The Commission states that from information received from the chief of the army engineers in charge of the work it will require about 4,000 acres of land for the right of way, and the cost of this, including damage claims and water rights abolished, is estimated close to $500,000. The Commission includes: David Baird, Camden, N. J.; Peter Campbell, Newark, N. J.; Samuel Heilner, Mattawan, N. J.; Benjamin Brown, and Frederick W. Donnelly, of New York.

DRAINAGE BASIN.—Pittsburg, Pa.—The Common Council has passed an ordinance providing for the reconstruction of the Try St. drainage basin. Estimated cost, about $138,000.

*PIER.—Philadelphia, Pa.—Bids were received on Jan. 20, for the construction of the superstructure of the Vine St. pier, as follows: The McClintic-Marshall Construction Co., Park Bldg., Pittsburg, Pa., $314,000; W. S. P. Shields, $339,000; Costello & Co., $343,648; James G. Doak & Co., $344,482; Sax & Abbott Construction Co., $353,710; American Paving & Construction Co., $357,000. The successful contractor is given nine months to complete the work. The pier will be a 2-story steel structure. J. F. Hasskarl is Acting Dir. Dept. Wharves and Docks.

COLD STORAGE PLANT.—Crisfield, Md.—The Consumers' Ice Co. will build an ice and cold-storage plant. Bids will be opened Feb. 10 for erection of building of ordinary construction to cost $5,000. Cost of machinery, $12,000. Daily capacity, 23 tons of ice. James B. Tawes is Pres.; C. A. Lockerman, Vice-Pres.; A. W. Tawes, Secretary-Treas.

DOCK, ETC.—Baltimore, Md.—The Harbor Board has approved plans of Oscar F. Lackey, Harbor Engr., for the water front street and municipal dock to be built in South Baltimore, and decided to widen Light St. to 120 ft. as far as Hill St., at which point proposed street, which is to be 106 ft. wide, with sidewalks, 10 ft. wide, will cut diagonally across to Hughes Ave. and Williams St. It will extend along Hughes Ave., which is to be widened on South Side to point 90 ft. east of Covington St., then to Montgomery St., curving around Federal Hill Park. The street at present will end at Montgomery St., but later may be extended to Locust Point. The new dock is to be built at the intersection of Covington St. and Hughes Ave., and will have a slip on either side. The cost will be provided out of the $2,000,000 dock loan.

PIER.—Baltimore, Md.—The Baltimore Steam Packet Co., Capt. John R. Sherwood, Pres., will erect a pier at Barre St., it is reported.

BRASS AND COPPER PIPE, ETC.—Washington, D. C.—Bids will be received until Jan. 31 by the Bureau of Supplies and Accounts, Navy Dept., Washington, D. C., for furnishing supplies to the following navy yards and naval stations: Boston, Mass., Schedule 3274, 2,300 sq. ft. compressed sheet cork. Schedule 3261, 22 electric soldering irons, miscellaneous electric supplies, 300 lbs. rubber insulating tape. Schedule 3266, miscellaneous composition pipe fittings. Schedule 3264, 5,700 lbs. brass and copper pipe. Schedule 3272, 6,000 ft. w.-i. or steel pipe. Schedule 3266, 420 composition unions; Brooklyn, N. Y., Schedule 3265, 1,800 ft. magnesia pipe coverings, Schedule 3261, 195 nonwatertight bells and buzzers, Schedule 3271, 34,000 lbs. sheathing copper, Schedule 3272, 338,350 lbs. medium plate steel, 92,400 lbs. shapes steel, Schedule 3264, 25,850 lbs. brass pipe, Schedule 3263, 5,000 ft. galvanized w.-i. pipe; Annapolis, Md., Schedule 3259, three motors; Norfolk, Va., Schedule 3266, miscellaneous composition pipe fittings. Schedule 3264, 18,000 lbs. brass pipe, 400 ft. flexible copper tubing, 2,835 lbs. copper tubing, Schedule 3266, 60 composition gate valves, 60 brass angle and check valves; Portsmouth, N. H., Schedule 3271, 5,330 lbs. brass tubing; Philadelphia, Pa., Schedule 3266, 42 brass gate valves, 108 brass globe valves.

SHIELDS.—Washington, D. C.—The contract for furnishing shields for Barbette carriages, bids opened on Dec. 29, by the Chief of Ordnance, U. S. A., has been awarded to the HATFIELD STEEL FOUNDRY CO., Sheffield, England, at $10,750. The first shield to be delivered in four months and two shields each month thereafter.

BULKHEAD.—Portsmouth, Va.—E. CROSS & SON CO., Portsmouth, has secured the contract for the construction of 1,300 ft. of bulkhead work along the front of the Portsmouth Company's tract. The length of the bulkhead may be increased to 3,000 ft.

COAL PIERS. — Charleston, S. C.—The Cumberland Corporation, Mark W. Potter, Pres., 24 Broad St., New York, has decided, it is reported, upon construction plans for coal piers.

DREDGING. — Jacksonville, Fla. — The HILLSBORO DREDGING CO., Tampa, Fla., has been awarded the contract at 12½ cts. per cu. yd. for dredging 177,50 cu. yds. of material from Sarasota Bay, Fla. Bids were opened on Jan. 5 by Capt. George R. Spaulding, Corps Engrs., U. S. A., Jacksonville. Noted on Jan. 19.

QUAY WALL.—Key West, Fla.—The contract for the construction of the quay wall at Key West, Fla., has been awarded to the HENNEBIQUE CONSTRUCTION CO., 1170 Broadway, New York, at $109,000.

DITCH.—Lake Arthur, La.—The WILKINS CO., Jennings, La., has been awarded the contract for constructing a 13-mile ditch west of Lake Arthur, in the Thornwell Drainage District, which recently voted a tax for the work. More than 1,000 acres will be drained. The ditch will be 20 ft. wide at the bottom, having an average depth of 5 ft.

DRAINAGE.—St. Bernard, La.—The Drainage District of St. Bernard Parish, St. Bernard, have voted a special tax for drainage, to be followed by a bond issue of $500,000, also authorized, so that the Board of Commissioners for the Bayou Terre-aux-Boeufs Drainage District can undertake the work at once.

*STRUCTURAL STEEL FABRICATION, ETC.—New Orleans, La.—Bids will be received by the Board of Commissioners of the Port of New Orleans, 200 New Court Bldg., until 1.30 p. m., Feb. 21, for the fabrication and erection of the structural steel and castiron for the William A. Kernaghaan shed. For details see advertisement in this issue.

DRAINAGE CANALS.—Cleveland, Miss.—Bids will be received by the Board of Drainage Commissioners of Bolivar County, Mississippi, at the office of Sillers, Owen & Sillers, Att'ys, Cleveland, until 2.30 p. m., Feb. 16, for the excavation of the following drainage canals: Holmes Lake, length, 7.2 miles, average cut 10.2 ft., bottom widths 10, 14 and 16 ft.; excavation, 388,000 cu. yds.; Snake Creek, the channel of Snake Creek is sufficiently large to discharge all the water falling in its water-shed, but for the fact that it is congested by standing timber, logs and debris of all sizes. Bids will be asked for clearing 21 miles of Snake Creek between Holmes Lake cut-off and the Bogue Phalia; Mound Bayou, length, 8.7 miles; average cut, 8.3 ft.; bottom widths, 10, 15 and 20 ft.; excavation, 320,000 cu. yds.; Jones' Bayou Cut-off, length, 8 miles; average cut, 11.6 ft.; bottom widths, 4 ft.; excavation, 34,000 cu. yds.; Goose Lake Cut-off, length, 1.7 miles; average cut, 9.3 ft.; bottom widths, 10 ft.; excavation, 71,000 cu. yds. Cypress, oak and gum timber will be encountered. The character of the soil to be encountered is clay loam and sand loam. The plans, specifications, profiles and blank forms on which bids must be made are on file for inspection at the offices of W. W. Boone, Ch. Engr., Cleveland.

LEVEE WORK.—Greenville, Miss.—The Board of Mississippi Levee Commissioners, Greenville, will receive bids until noon, Feb. 1, for levee enlargement work amounting to about 672,000 cu. yds. Specifications and information may be obtained from W. J. Shackelford, Ch. Engr.

PIPE LINE.—Columbus, Miss.—Surveys are being made for a pipe line from Fayette gas fields to Columbus. The line will be about 40 miles long. Blair Hughes, Birmingham, Ala., is Engr.

EXCAVATION WORK.—Paducah, Ky.—The Caldwell Concrete Co., 1516 Jefferson St., Paducah, desires to sublet about 25,000 cu. yds. of excavation, suited for a drag line outfit or a dredge.

DITCH IMPROVEMENT. — [illegible] Ohio.—Bids were received on [illegible] County Commissioners, Wapa[illegible]pakoneta, [illegible]4 by the Cook ditch improverent, inclu[illegible] for the [illegible]e dredging of the east fork of St. Ma[illegible]iver, for several miles. The contract h[illegible] awarded to EDW. BODETT, To[illegible]Ohio, at $39,970.

*LOCK AND DAM.—Cincinn[illegible]o.—Bids will be received by Maj. H. [illegible], Corps Engrs., U. S. A., Cincinnati, [illegible] 2 p. m., February 20, for constructing [illegible] and dam No. 29, Ohio River, near Ash[illegible]Ky.

DITCH.—Wheatfield, Ind.—T[illegible]tract for constructing the R. E. Davis d[illegible]t Wheatfield has been awarded to H. [illegible]ARBLE, Wheatfield, at about $22,000.

DITCH.—Valparaiso, Ind.—[illegible] Keller, Comr. of the Phillips Ditch, le[illegible] contract on Jan. 14 for the constructi[illegible] the proposed ditch to WOOLMAN CO[illegible]UCTION CO., Sandusky, Mich., at $10,[illegible]e lowest of 18 bids. The ditch will st[illegible]t north of Boone Grove and terminate a[illegible] Kankakee River.

DOCKS.—Michigan City, Ind[illegible]e Board of Public Works will receive [illegible] until 10 a. m., Feb. 7, for the construct[illegible] extensive docks along the harbor.

DRAIN.—Shelbyville, Ind.—Bid[illegible]l be received by Samuel P. Harris, Dr[illegible] Comr., Shelbyville, until 2 p. m., Jan[illegible] at the office of Isley & Israel, Att'y[illegible]Morrison Bldg., Shelbyville, for the const[illegible]on of a public drain in Brandywine Tow[illegible]p, Shelby County.

MONUMENT.—Tipton, Ind.—S[illegible] have been taken toward the erection [illegible] a monument at this place to the memo[illegible] Ensign John Tipton. The Commissione[illegible] Tipton County will have the matter in [illegible]rge.

RACE TRACK.—South Bend, [illegible]nd.—The South Bend & Mishawaka Fair [illegible]ciation has secured a 70-acre site on wh[illegible] to construct a modern race track. Dr. [illegible] R. Carson and E. J. Fogarity are interested.

TELEPHONE SYSTEM.—Center, Ind.—The Center Telephone Co., Center, recently incorporated, is in the market for material and equipment for the construction of a telephone system.

HARBOR.—Manistee, Mich.—Federal engineers have reported favorably upon the proposed improvement of Manistee Harbor.

DRAIN.—Muskegon, Mich.—Bids will be received by Frank Robinson, Supt. of Drains of Muskegon County, at the office of August Berggren, Fruitland Township, until 9 a. m., Jan. 27, for the construction of the Fruitland drain.

DRAINAGE.—Sault Ste Marie, Mich.—The Northern Michigan Land Co., Chicago, has purchased 712,000 acres of land from the Upper Peninsula Land Co., and plans to drain a tract of 25,000 acres of swamp land in the Tahquamenon River territory. H. H. Hamilton, St. Paul, Minn., is one of the promoters.

IRON CASTINGS, SEWER GRATES, ETC. —Detroit, Mich.—The Common Ciuncil on Jan. 17 awarded the following contracts entered into by the Department of Public Works, J. J. Haarer, Comr. All contracts to run until Jan. 31, 1912: For all iron castings, sewer grates, etc., to the CO-OPERATIVE FOUNDRY CO.; for furnishing receiving basin stone, to F. C. ORTMAN, at $28.24 for blue stone; for furnishing vitrified sewer pipe of the following sizes, 33-in., 30-in., 24-in., 12-in., 15-in., and 6-in., to J. CALVERT'S SONS, 145 Griswold St., Detroit; for furnishing cinders for the east side of Detroit, to GARNER BROS., 499 Chene St., Detroit; for furnishing cinders for the west side of Detroit, to the WAYNE COUNTY CINDER & SUPPLY CO., both at 55 cts. per cu. ft.; for furnishing No. 1 and 2 cedar block, to W. E. CURRIE, 20 McGraw Bldg., Detroit, to furnish No. 1 at 40 cts. per sq. yd., and No. 2 at 30 cts.; for Medina stone in circles, to the ORLEANS COUNTY QUARRY CO., 5-in. stone, at 38 cts. per lin. ft., and 6-in. stone at 44 cts.; for furnishing paving brick of different kinds to the following, for furnishing 1,000,000 bricks each more or less: Wassall Brick Co., Nelsonville Brick Co., Deckman Duty Brick Co., The Bessemer Limestone Co., The Wooster Shale Brick Co., The Detroit Vitrified Brick Co., The T. B. Townsend Brick & Contracting Co., the Novelty Brick & Coal Co., the Massillion S. & F. B. Co., and the Alliance Clay Product Co.; for furnishing gravel to the A. P. WEIDEMAN CO., 73 Home Bank Bldg., Detroit, at 1.035 per cu. yd. on cars.

ORE DOCK.—Marquette, Mich.—The Lake Superior & Ishpeming Ry. Co., it is reported, will build a large ore dock here. The pier will be constructed of reinforced concrete. It will be 1,200 ft. long, 54 ft. wide and 75 ft. high, and will have 200 pockets of an aggregate storage capacity of 47,000 tons. The spouts will be 35 ft. long. They will be operated in groups of six by electric motors. The only wood used in the structure will be the maple flooring at the bottom of the pockets, and the deck, which will also be of maple. The steel contract has been let to the WISCONSIN BRIDGE & IRON CO. In deciding upon the specifications the engineers have had in mind the continually increasing size of the ore carriers. Work on the dock will be begun at once and it is expected to have the structure ready for use not later than the opening of navigation in 1912.

HARBOR.—Chicago, Ill.—The outer harbor bill was introduced in the State Senate on Jan. 17. The bill provides for an extensive outer harbor on the lake front at a cost of $50,000,000.

LEVEE WORK.—East St. Louis, Ill.—Surveys are being made for the construction of a levee from the Cahokia Creek division channel to the southern limits of the East Side Levee and Sanitary District. As soon as plans and estimates can be prepared, bids will be asked. T. N. Jacob is Ch. Engr.

TILE.—Champaign, Ill.—Bids will be received until Jan. 27 by the Commissioners of Hillsburg Slough Special Drainage District, of Champaign and Ford Counties, at the law office of Ray & Dobbins, Champaign, for furnishing and laying tile in Sub District No. 1.

DRAINAGE.—Juneau, Wis.—The Circuit Court for Dodge County will hear petitions on Feb. 15 for permission to organize a drainage district of the territory known as Mud Lake, between Reeseville and Richwood, Wis., in sections of the Townships of Lowell, Shields and Portland, in Dodge County, and Milford and Waterloo, in Jefferson County, and consisting of about 10,000 acres.

DITCH.—Britt, Iowa.—Hancock County will construct a drainage ditch 60 miles in length. It will start at the boundary line of Hancock and Franklin Counties, where it will be 60 ft. wide and 12 ft. deep. These dimensions will be maintained until near Britt, where it will divide, one branch extending to the wet land near Hayfield and the other branch twelve miles north of here.

DITCH.—Sioux City, Iowa.—The Supervisors of Woodbury County, Sioux City, have voted to establish the Little Sioux ditch.

DRAINAGE DITCH.—Des Moines, Iowa.—Contracts have been awarded as follows, bids opened on Jan. 16, by H. B. Frase, County Audr., for the construction of Polk Story Drainage District No. 2, Polk and Story Counties: Open ditch work, to C. E. ELZY, Nevada, Iowa, at 15.5 cts. per cu. yd.; tile work, to C. CHRISTOFSON, Slater, Iowa, at $19,375. The work includes about 45,000 cu. yds. of excavation and 27,835 ft. of 8 to 30-in. tile.

CULVERTS.—Warren, Minn.—The County Auditor will receive bids until 10 a. m., Feb. 4, for furnishing about 2,200 ft. of corrugated culverts as follows: 25 of 3-ft., 25 of 4-ft., 35 of 5-ft. and 15 of 6-ft. Specifications may be obtained of W. R. Hoag, C. E., 1320 S. E. Seventh St., Minneapolis.

HOSE.—Mankato, Minn.—A. H. Schere, City Clk., will receive bids until 10 a. m., Jan. 30, for 1,000 ft. of 2½-in. rubber lined cotton fire hose.

ROAD ROLLER.—St. Paul, Minn.—Geo. J. Ries, County Audr., will receive bids until 10 a. m., Feb. 6, for a steam or gasoline road roller, weight to be 10 or 12 tons, 68 to 72-in. wheel, 2-speed double engine.

CULVERTS.—Dickinson, N. Dak.—F. L. Hughes, County Audr., will receive bids until 10 a. m., Feb. 7, for metal culverts, ranging in size from 45 to 48 ins. in diameter and 20 ft. in length.

DITCH, ETC.—Rector, Ark.—The contract will be awarded on March 16 by the Commissioners of Drainage District No. 8, Clay County, for the construction of 24 miles of main ditch and 30 miles of laterals, about 1,850,000 cu. yds. J. D. Mitchell is Ch. Engr., Rector.

DITCH, ETC.—Rector, Ark.—The County Courts of Greene and Lawrence Counties will probably award the contract in March for the construction of 16 miles of main ditch and 34 miles of laterals, about 2,510,000 cu. yds., in Drainage District No. 1, Greene and Lawrence Counties. J. D. Mitchell is Ch. Engr., Rector.

ICE PLANT.—Houston, Tex.—J. B. Cochran has purchased the ice plant of the People's Ice Co. from P. B. Timpson, for $25,000. It is announced that the plant will be rehabilitated and considerable new machinery installed.

DREDGING.—Houston, Tex.—The taxpayers of Houston, on Jan. 10 voted in favor of issuing bonds for $1,250,000, the proceeds to be used for deepening Buffalo Bayou to 25 ft. and the establishment of a deepwater port here. It is provided by a Congressional appropriation that the Federal Government shall expend an equal amount. This proposed work will require a large amount of dredging and other machinery.

OIL STORAGE HOUSE.—Bremerton, Wash.—Bids were received as follows on Jan. 21, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the construction of an oil storage house at the Puget Sound navy yard: Hans Pederson, 23 Madison Block, Seattle, Wash., $26,275; W. M. Concannon Co., Monadnock Bldg., San Francisco, $26,500; Puget Sound Bridge & Dredging Co., Seattle, $28,884; Sound Construction & Engineering Co., Seattle, $27,436; C. F. Graff, Seattle, Wash., $26,404.

DOCKS.—Portland, Ore.—It is reported that the city has amended its charter to provide for the issue of $2,500,000 of bonds to purchase land and erect municipal docks.

AMUSEMENT STRUCTURE.—Santa Monica, Cal.—The L. A. Thompson Scenic Ry. Co., of New York, has obtained a building permit from the city to construct an amusement structure, to cost $75,000, on the ocean front. The building will be 120 × 500 ft., 40 ft. high and will contain 27 stores and a "Dragon Gorge." An application for a franchise to construct a wharf 500 ft. long at the foot of Kinney St. is now pending before the City Council.

DREDGING.—Oakland, Cal.—The contract for deepening the channel in the Key Route Basin was awarded by the Board of Public Works on Jan. 11 to the AMERICAN DREDGING CO., 95 Marget St., San Francisco, at 9.9 cts. a cu. yd., which will bring the total cost to $297,000. Three other firms that placed bids for the contract were: San Francisco Bridge Co., 14.7 cts.; N. R. Harris, 16 cts.; Associated Contracting Co., 16.6 cts. The contract calls for the dredging of channel on the seaward side of the rock retaining wall now being constructed in the Key Route basin. The work is part of the project of water front improvement contemplated between the Key Route and Southern Pacific moles. The lines of the retaining wall have been fixed by the engineers of the War Department and will enclose 400 acres of territory, which will be filled in and devoted to manufacturing sites. The specifications of the contract call for the removal of 3,000,000 cu. yds. of earth and mud, which will be used to fill in the enclosed territory, and it is estimated that 150 acres of the entire 400 will be filled in this manner. This will create a channel 30 ft. in depth.

ELEVATORS.—San Francisco, Cal.—The OTIS ELEVATOR CO., 17 Battery Pl., New York, has secured the contract for furnishing and installing elevators in the Hall of Justice, at $13,945.

LEVEE.—Bakersfield, Cal.—The city is considering the construction of levees in the south banks of the Kern River. Estimated cost, $75,000.

NEW TOWN.—San Bernardino, Cal.—The Calzona Co., San Bernardino, has been incorporated here with a capital stock of $50,000. The company will found a new town (Calzona) on the west bank of the Colorado River in this county. Plans are in preparation for a pumping plant to cost $40,000, which will raise water from the Colorado River, into the new townsite.

ROCK CRUSHERS.—Corona, Cal.—The ALLIS-CHALMERS CO., Milwaukee, Wis., has been awarded contract for furnishing five gyratory rock crushers, two each to be operated by separate motor, for the quarry, recently acquired by W. E. Harris and associates.

RESORT.—Los Angeles, Cal.—The Santa Fe Springs Co. has been incorporated here, with a capital stock of $150,000. Dr. Stuart Hutchinson, Pres.; Irving S. Bigsby, Treas., and Wilber J. Filley, Secy. The company has recently acquired the Santa Fe Springs, ten miles from here, where they will install 24 cottages, casino, dining hall and an electric plant for lighting and heating.

STEEL PIPE.—Yucaipa, Cal.—The BAKER IRON WORKS, Los Angeles, Cal., has been awarded a contract for 70,000 ft. of steel pipe to be laid for the Redlands & Yucaipa Valley Land Co. at Yucaipa at $30,000. The company has ordered a ditch digging machine, to be sent from here, having a capacity of 1,800 ft. of ditch per day.

WHARF.—New Mills, N. B.—The contract for constructing a wharf here has been awarded by the Department of Public Works, Ottawa, Ont., to WARREN TAYLOR, Salisbury, N. B., at $11,480. R. C. Desrochers is Secy.

BATH HOUSE.—Fort Williams, Ont.—The city is considering the construction of a public bath house.

MOTOR TRUCKS.—Port Arthur, Ont.—The City Council is considering the purchase of motor trucks for the fire department. Address J. J. Carrick.

WHARF.—Michipicoten, Ont.—Bids will be received until Feb. 13 by the Public Works Department, R. C. Desrochers, Secy., Ottawa, Ont., for the construction of a wharf at the mouth of the Michipicoten River, District of West Algoma, Lake Superior, Ont. Plans from J. G. Sing, Res. Engr., Toronto, Ont.

DEEPENING RIVER.—Montreal, Que.—The sum of $3,000,000 is being included in supplementary Government estimates for deepening the Back River at Montreal, Riviere les Prairies, and the French River. R. C. Desrochers is Secy. Dept. Pub. Wks., Ottawa, Ont.

UNDERGROUND CONDUIT SYSTEM.—Montreal, Que.—Three additional municipal loans aggregating $7,500,000 have been authorized by the City Council, $5,000,000 for building an underground conduit system, $1,500,000 for the establishment of a water filtration plant and a main for street improvement.

COLD STORAGE PLANT.—Brandon, Man.—T. Sinclair, Arch., is preparing plans for a cold storage plant to be erected for a syndicate of business men here.

TELEPHONE EXCHANGES. — Vancouver, B. C.—The British Columbia Telephone Co. will erect four exchanges to cost $25,000 apiece at Alberni, Duncans and Nelson.

ICE PLANT.—Velardena (Durango), Mex.—The Torreon Mercantile Co., of Torreon, will install an ice plant here.

U. S. POSSESSIONS.

(**Denotes that this work is advertised in Engineering News.*)

LUMBER, ETC.—Panama.—Bids will be received until Jan. 31 by Capt. F. C. Boggs, Corps Engrs., U. S. A., Gen. Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for furnishing, according to Circular 617, lumber, valves, fire brick, etc.

*RACK RAILWAY MATERIAL.—Panama.—Bids for rack railway material for the Panama Canal locks, including rack, steel crossties, bolts and nuts, tie clips, washers, steel channels, rail bonds, copper conductor rails, steel conductor rails, insulators, bumpers, frogs, switches, etc., will be received at the office of Capt. F. C. Boggs, Corps Engrs., U. S. A., Gen. Purchasing Officer, Isthmian Canal Comn., Washington, D. C., until 10.30 a. m., March 24. Blanks and general information relating to this Circular (No. 619) may be obtained from the office of the Isthmian Canal Commission or the offices of the Assistant Purchasing Agents, 24 State St., New York; 55 National Realty Bldg., New Orleans, La., and 1086 North Point St., San Francisco, Cal., also from the U. S. Engineer offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburg, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich. Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.

CONTRACT PRICES.

(**Denotes that this work is advertised in Engineering News.*)

ENGINEERING SUPPLIES.—Minneapolis, Minn.—Bids were received on Jan. 13 by the City Council, as follows: For 105,000 bbls. Portland cement f. o. b. Minneapolis: Shevlin-Carpenter Co. (Medusa), $1.40; Guarantee Cement Co. (Universal), $1.30; Huron Portland Cement Co., of Huron, Mich., $1.35; N. W. Lime Co., of St. Paul, Minn. (Atlas), $1.30; Union Ry. Storage Co. (Marquette), $1.33; Chicago Portland Cement Co. (A A), $1.30; 5,000 cu. yds. crushed granite f. o. b. Minneapolis: New Ulm Stone Co., of New Ulm, Minn., $1.96; Minn Flint Rock Co., of New Ulm, $1.80; Wisconsin Granite Co., of Chicago, Ill., $1.93; 175,000 sq. yds. creosoted block, f. o. b. Minneapolis, Son Wood Refining Co., Atlanta, Ga., 4-in. yelolw pine, $1.78; 3½-in. yellow pine, $1.59; Kettle River Co., of Minneapolis, 4-in. yellow pine, $1.60; 3½-in. yellow pine, $1.45; 4-in. Norway pine, $1.49; 3½-in. Tamarac pine, $1.32; Republic Creo Co., of Indianapolis, Ind., 4-in. yellow pine, $1.59; 3½-in. yellow pine, $1.40; 4-in. Norway pine, $1.4775; 3½-in. Tamarac pine, $1.31; 20,000 sq. yds. paving blocks f. o. b. Minneapolis: Parrington Paving Block Co., of Galesburg, Ill., $0.998; 5,000 lin. ft., 5 × 20-in. granite curb f. o. b. Minneapolis: Robert Graham, of St. Cloud, Minn., straight, $0.77; radius, $0.85; 5,000 lin. ft. sandstone curb, f. o. b. Minneapolis, Kettle River Co., straight, 5 ft. × 18-in., $0.53; 5 ft. × 20-in., $0.56; 6 ft. × 20-in., $0.66; radius, 5 ft. × 18-in., $0.63; 5 ft. × 20-in., $0.66; 6 ft. × 20-in., $0.76; Barber Asphalt Co., of Minneapolis, straight, $0.52, $0.55, $0.65; radius, $0.62, $0.65, $0.75; 40,000 sq. yds. sandstone paving blocks f. o. b. Minneapolis, Kettle River Co., common, $1.55; smooth, $1.75; Barber Asphalt Co., common, $1.58; smooth, $1.80. Ellis R. Dutton is City Engr.

EXAMINATIONS.

ACCIDENT INSPECTOR, Public Service Commission, Second District, $1,800. Open to men only. The duties are to investigate accidents and examine the service of the steam railroads with reference to the efficiency of service, etc. Thorough practical experience in similar service is necessary and applications which do not show suitable experience will be rejected. Subjects of examination and relative weights: Traffic conditions, rules, customs and practices and duties of the position, 1; age, experience and personal qualifications, 1. No sample questions.

CHIEF INSPECTOR OF GAS, Public Service Commission, Second District, $2,500. The duties of this position are to supervise the inspection and testing of gas supplied throughout the state and to examine the methods of its manufacture and distribution. Candidates should be graduates of duly established schools of technology and should have had at least two years' experience in work related to the duties of the position. Gas chemistry, testing, manufacturing details and distribution problems are all-important. Subjects of examination and relative weights: Gas, including manufacture, distribution, methods of testing chemical composition, candle power and calorific value, methods of testing gas meters, etc., 1; age, education, experience and special training, 1. Open to non-residents, etc., as above. No sample questions.

LEVELER, $4.50 to $5 per day. Candidates must have had at least two years' practical experience in civil engineering, of quality satisfactory to the Commission. Candidates who have graduated in engineering from a school maintaining a standard satisfactory to the Commission will be admitted upon proof of one year's experience since graduation. Scope of examination: Use of field instruments, survey methods and computations, structural mechanics and hydraulics, inspection of materials and work, and methods and practice in engineering construction, weight 5; experience and personal qualifications, weight 3; education, weight 2. Time allowed for the written examination, 8 hours. Competitors may bring to the examination books of reference, and should also furnish themselves with logarithmic tables. Non-residents admitted as above.

ASSISTANT CIVIL ENGINEER, $5 to $6 per day. Candidates must have had at least three years' practical experience in civil engineering of quality satisfactory to the Commission. Candidates who have graduated in engineering from a school maintaining a standard satisfactory to the Commission will be admitted upon proof of two years' experience since graduation. Scope of examination: Use of field instruments, survey methods and computations, structural mechanics and hydraulics, inspection of materials and work, and methods and practice in engineering construction, weight 10; experience and personal qualifications, weight 7; education, weight 3. Time allowed for the written examination, 8 hours. Competitors may bring to the examination books of reference, and should also furnish themselves with logarithmic tables. Open to non-residents as above.

AID IN ANTHROPOLOGY.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Feb. 23, to secure eligibles from which to make certification to fill a vacancy in the position of Aid in Anthropology, at $75 a month, in the National Museum, Washington, D. C., and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Outline drawing, 10 points; General elementary questions in archaeology and ethnology, 15 points; Museum methods, 25 points; Field methods, 25 points; Education, training and experience, 25 points. Applicants must have reached their 18th, but not their 30th birthday. Examination form 1312.

NEW YORK STATE.—Open competitive examinations for the state, county and village service will be held in various cities throughout the state Feb. 18, for the positions mentioned below. Intending competitors must execute application blanks and file them in the office of the Commission before the date of the examination. Accepted candidates will be notified, about a week prior to the date set, when and where to appear for examination. No one will be admitted to the examination without the official notice. If an application should be rejected, due notice will be sent. Application blanks must be filed on or before noon of Feb. 11, 1911. No application will be accepted unless properly executed and filed with the State Civil Service Commission, Albany, N. Y., in time to arrange for the examination. Competitors must be at least 21 years of age on the date of the examination, citizens of the United States, and, for at least three months prior to the date of examination, residents of New York State, unless otherwise noted below. Non-residents or noncitizens when admitted, are (except in special cases) subject to the provisions of Civil Service Regulation X, that in case the eligible list contains the names of three or more citizen residents of New York State, they shall be preferred in certification over non-residents and non-citizens.

INDUSTRIAL NOTES.

THE MICHEL-KURZE CO., 50 Church St., New York, N. Y., has recently been organized to specialize in the preparation of illustrations of machinery. The business will be under the direction of Mr. A. Eugene Michel, Assoc. Mem. Am. Soc. M. E.

THE NEW MILEAGE of electric railways built in 1910 was approximately 1,400 miles, compared with 890 miles in 1909 and 1,290 miles in 1908. In this list, however, there is included the electrification of existing steam roads; such as, the New York Central R. R., from Wakefield to White Plains.

THE RAPID INCREASE in the rate of wages paid to unskilled labor has not been confined to this country alone. The Consul-General at Berlin gives, in a recent report, the average daily wages paid to adult unskilled male laborers in 23 cities in 1893 and 1910. The figures average $0.569 in 1893 and $0.774 in 1910. The low wage paid is of little interest, but the fact that there has been a steady increase amounting to 36% would indicate that the compensation of skilled laborers had increased even faster.

VAN HORNE ELY, of New Brighton, Pa., is promoter in the purchase of the lighting and traction system owned by the Beaver Valley Traction Co., by the Morgan-Drexel interests of New York and Philadelphia. It is thought that this is the initial step in a scheme to consolidate many of the western Pennsylvania and eastern Ohio traction companies under one corporation. The new organization has purchased the franchise enabling them to connect the Beaver Valley lines with lines owned by the Pittsburg St. Ry. Co. on both sides of the Ohio River.

MR. W. VAN R. WHITALL, for the past two years connected with the Ransome Concrete Machinery Co., as manager of their centering department, which was developed by him, has incorporated as W. Van R. Whitall, Incorporated, with headquarters at 30 Church St., Room 508, New York City. The company will handle the Lakewood Concrete Mixer, Ideal and Eclipse Buckets and a full line of contractors' equipment. Mr. E. Gwynn Robinson, who was formerly connected with the Ransome Co., has joined the selling staff of W. Van R. Whitall, Inc. Mr. Blaney Stevens, formerly Chief Engineer Alaskan Nome Ry. Co., and Reynolds, Alaska Development Co., has joined the company as its chief engineer. The company is also prepared to undertake engineering work.

CANADA'S AVAILABLE WATER POWER.—According to official estimates made by the Department of the Interior, the available water powers of the Dominion of Canada are capable of developing energy representing more than 25,000,000 HP., which if produced from coal would represent a consumption of more than 562 millions of tons per annum, at the rate of 21.9 tons of coal to the horsepower. The Province of Quebec leads with an available water power of more than 17,000,000 HP., its present development of horsepower, however, being only 50,000; whereas, Ontario, with a water power of not much in excess of 3,000,000 has a present development of more than 330,000 HP. At Chambly, 12 miles north of St. John's on the Richelieu River, just below the last of the series of rapids between the two places, is located a plant with a capacity of 22,000 HP., which furnishes power to St. John's and other towns in this section of the Province.—Consular Report.

HIGH RECORD EXPORTS of Iron and Steel Manufactures in 1910.—Two hundred million dollars worth of iron and steel manufactures were exported from the United States during the calendar year 1910, a larger total in value than in any earlier year. The largest exportation prior to 1910 was $197,000,000 worth in the calendar year 1907,

while in 1902 the total was but $98,000,000 and in 1903, $99,000,000, thus indicating that the exports of 1910 will be more than those of 1902 and 1903 combined. In fact, iron and steel manufactures now form nearly one-fourth of the total value of manufactures exported. The total value of all manufactures, including those of iron and steel, exported during the calendar year 1910 aggregated, according to the Bureau of Statistics, Department of Commerce and Labor, about $830,000,000, and those of iron and steel alone, about $200,000,000. It may be properly said, therefore, that iron and steel manufactures form in value nearly one-fourth of the exportation of manufactures of all kinds. In addition to this large exportation to foreign countries the shipments of iron and steel to Porto Rico, the Hawaiian Islands and Alaska aggregated about $12,000,000. Among the principal articles forming this grand total of $200,000,000 worth of iron and steel manufactures exported in 1910 are sheets and plates of iron and steel, $14,000,000 in value; steel rails for railways, about $10,000,000; wire, over $9,000,000; pipes and fittings, more than $9,000,000; tools, chiefly for use of builders, $8,000,000; sewing machines, about $8,000,000; electrical machinery, approximately $7,000,000; structural iron and steel, about $7,000,000; mining machinery, more than $6,000,000; while other articles in which the values for the year range above $1,000,000 are wire nails, wood-working machinery, windmills, sugar mill machinery, traction engines, stationary engines, printing presses, pumps and puming machinery, cash registers, and locomotives. Of tin plates, including terne plates and taggers tin, the value of exports for the year was a little more than $1,000,000, the quantity exported being about 30,000,000 lbs., and the countries to which sent more than a dozen in number, a large proportion of them going to Canada, Mexico and Cuba, but smaller quantities to the countries of Central and South America, Asia, Oceania, Africa and in a few instances to Europe.

BUILDING OPERATIONS in 1910, as computed by Bradstreet's, aggregated $838,933,000, compared with $881,978,000 in the previous year. These are the actual expenditures in 114 cities. The same publication also gives a report on the expenditures in 65 cities for the last six years as follows:

1905	$595,359,414
1906	624,126,796
1907	554,048,260
1908	509,899,409
1909	723,547,019
1910	667,452,493

It will be seen that while the total for 1910 shows a marked falling off compared with the previous year, yet it overtops 1906, which was up to that time the high record. In analyzing the situation further it is discovered that there is a falling off in the City of New York, all boroughs, of practically $130,000,000. In other words, the depression in the building industry was conspicuous in New York City, and, while in other parts of the country there was a marked falling off in some centers, such as Des Moines, Iowa; Harrisburg, Pa.; Newark, Ohio; San Jose, Mo.; Superior, Wis., and Williamsport, Pa., these were probably caused by local influences, as there appears to be no relation either geographically or as to the principal industries of these cities. On the other hand, there have been marked increases in such places as Bayonne, N. J.; Canton, Ohio; Davenport, Iowa; Duluth, Minn., and Sioux Falls, So. Dak. The figures in themselves are simply an index to the work done and it should be remembered that throughout the year 1910 there was continual complain, probably more so in New York than at any other place, regarding the dull business.

It is impossible to draw any broad inferences from this showing as to the probable trend in building trade the coming year, but it would seem from a knowledge of local conditions that in New York City at least the expenditure for building had been too great during the last few years.

TRADE PUBLICATIONS.

TIME AND COST RECORD CLOCKS.—Monitor Time Clock Co., East Water and Grape Sts., Syracuse, N. Y. Paper; 6 × 9½ ins.; three 4-page circulars; illustrated.

These circulars relate to clocks for recording workmen's time in shops, in connection with cost-keeping systems and record cards.

LIGHTNING CONDUCTORS.—Arrow Conductor & Mfg. Co., 863 N. Franklin st., Chicago. Paper; circular, 8½ × 14 ins. (with blue print of details).

This describes the Arrow system, using a copper cable conductor. Specifications are given for its construction and erection. The accompanying blue-print shows the attachments, tips, grounds, etc.

ROAD ROLLERS.—The J. I. Case Threshing Machine Co. (Road Machinery Department), Racine, Wis. Paper; 9 × 12 ins.; pp. 28; illustrated.

The Case steam roller is described, with its special features, and its construction is described and illustrated in detail. Traction engines, dump wagons, sprinkling wagons and other specialties are included.

SURVEYING INSTRUMENTS.—Wm. Ainsworth & Sons, Denver, Colo. Leather; 3 × 6 ins.; pp. 120 + 60 blank pages of cross-section paper for memoranda; illustrated. 25 cts.

This is a manual of information as to the use and adjustment of transits and levels, the use of the stadia system, determination of the meridian, etc. There are also tables of refractions and stadia reductions.

PNEUMATIC SEPARATOR.—Gebruder Pfeiffer Engineering Works, Kaiserslautern, Germany. Paper; 8¾ × 11¼ ins.; pp. 4; illustrated.

This separator is for use in connection with grinding and pulverizing machinery. The material is passed through a fan, the air current throwing the fine dust to the side of the chamber while the coarser particles fall through to a hopper.

PITOT TUBES.—A. M. Lockett & Co., Ltd., New Orleans, La. Paper; 6 × 9 ins.; pp. 8; illustrated.

Pitot tubes of the form designed by Prof. W. B. Gregory are now being made for the market, under the name Tulane Pitot Tube. The tube is mounted on a long metal scale, to permit shifting its position when introduced into a pipe or channel. It is recommended for velocities from 3 to 15 ft. per sec.

MALLET LOCOMOTIVES.—Baldwin Locomotive Works, Philadelphia, Pa. Paper; 9 × 6 ins.; pp. 36; illustrated.

A variety of designs of Mallet duplex locomotives are shown in this pamphlet. They include 70-ton logging locomotives of the 2:4:4:2 class, 188-ton passenger engines of the 4:4:6:2 class, and freight engines of the 2:6:8:0, 2:6:6:2 and 2:8:8:2 classes. These last weigh 218 to 230 tons (without tenders) and are used by several roads.

PRESSURE TANKS.—Wm. B. Scaife & Sons Co., Pittsburg, Pa. Stiff paper; 6 × 9 ins.; pp. 30; illustrated.

Galvanized range boilers, hot water expansion tanks, fire extinguisher, gasoline, muffler, and in fact all sorts of small tanks are here illustrated and listed. There are also pneumatic water supply tanks of riveted steel, air receivers and welded tanks for high pressures. Besides tables of sizes and capacities of these tanks [illegible] includes a table of capacities [illegible] drical tank 5-16 ft. in diam[illegible] in height; also tables of us[illegible] such as the cubical measure [illegible] S. and Imperial, water pre[illegible] gauge equivalents, circumfer[illegible] ters of circles, etc.

CRANES.—Whitney Foundry [illegible] Harvey, Ill.; heavy paper [illegible] pp. 40; illustrated.

The manufacturers state tha[illegible] log they purpose to show the [illegible] of construction in their cranes [illegible] ent some views of typical ins[illegible] this they have succeeded adm[illegible] illustrations are clear and show [illegible] variety of cranes, including e[illegible] ing, locomotive and truck, jib [illegible] designed types of cranes for m[illegible]

LIST OF CONTRACTS PENDING.

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
1-28	Foundry, Bremerton, Wash. (Mfg. P.) (S.)	12- 8
1-28	Repairs, etc., Washington, D. C. (S.)	12-29
2- 4	Roof and runway, Norfolk, Va. (S)	1-12
2- 4	Travelling crane, Norfolk, Va. (S)	1-12
2-11	Oil tanks, Portsmouth, N. H. (S)	1-12
2-24*	Earthwork, Belle Fourche, S. Dak. (S)	12-29

Light, Heat and Power Plants.

Bids close.		Noted in issue of
1-27	Light Fixtures, Sheridan, Wyo.	1-26
1-30	Electric plant, Fort Screven, Ga.	1-19
1-31	Street lighting, Newton, Pa.	1-26
1-31	Generating unit, etc., Regina, Sask.	1-26
2- 1	Elect. equip., Owings, Mich.	1-26
2- 2	Electric wiring, Holdridge, Neb.	1-19
2- 3	Electric wiring, Salt Lake City, Utah	1-12
2- 6	Hydroelectric installation, Tacoma, Wash.	1-19
2- 7	Electric wiring, Roswell, N. Mex.	1-19
2- 7	Electric wiring, Watertown, Wis.	1-19
2- 8	Electric wiring, Melledgeville, Ga.	1-19
2-14	Elect. equip, Atlanta, Ga.	1-26
2-15	Elect. equip, Haverhill, Mass.	1-26
2-16	Light and power, Leavenworth, Kan.	1-26
3- 1	Gas plant, Monterey, Mex.	1-26

Bridges.

Bids close.		Noted in issue of
1-28	Bridge work, Lawrence, Kan.	1-19
1-30	Bridge, Gate City, Va.	1-19
1-30	Bridge, Kalamazoo, Mich.	1-19
1-30	Bridge work, Akron, Ohio	1-19
1-30*	Bridges, Kansas City, Mo	1-12
1-30	Bridge, Jacksonville, Fla.	1-26
1-30	Superstructure, Akron, Ohio	1-26
1-31	Bridge, Philadelphia, Pa.	1-26
2- 1*	Bridge plans, etc., Richmond, Va	12- 8
2- 6	Bridge repairs, Williamsport, O.	1-26
2- 6	Steel bridge, Ocilla, Ga	1-12
2- 6	Substructure, Zanesville, Ohio	1-19
2- 6	Bridge, Meridian, Miss.	1-26
2- 6	Bridge repair, Minneapolis, Minn.	1-26
2- 7	Bridge, Houma, La.	1-26
2- 7	Bridge, Elkhart, Ind.	1-26
2- 8	Bridge, Indianapolis, Ind.	1-26
2- 8*	Bridge, Salem, N. J.	1-19
2-27	Bridge, Yankton, S. Dak.	1-19
2-28	Bridge, Springfield, Ohio	1-26

Buildings.

Bids close.		Noted in issue of
1-28	Repairs, etc., Washington, D. C., (Mfg. Pl.)	12-29
1-28	Foundry, Bremerton, Wash. (Mfg. Pl.)	12- 8
1-28	Dept bldg, Ottawa, Ont.	1-19
1-28	Erection of bldg, Toronto, Ont.	1-19
1-30	Post office, Battleford, Sask.	1-19
1-30	Postal station, Toronto, Ont.	1-19
1-30	Post office, etc., Lindsay, Ont.	1-19
1-30	Public Bldg., Mount Forest, Ont.	1-19
1-31	Court-house, Onida, S. Dak.	10-20
1-31	Erection of bldg., El Paso, Tex.	1-26
2- 1	Building, Lockport, N. Y.	12-15
2- 1	Mills, Los Angeles, Cal. (Mfg. Pl.)	12-22
2- 1	Buildings, Owings Mills, Md.	1- 5
2- 1	Building, Baltimore, Md	1-12
2- 2	Post-Office, Holdredge, Neb	1-12
2- 2	Post office, Salt Lake, Utah	1-26
2- 2*	Post-office, etc., Roswell, N. Mex.	1- 5
2- 3*	Post-office, etc., Salt Lake City, Utah	1- 5
2- 3	Erection of building, Hillsdale, Mich	1-12
2- 6	Post-office, Mt. Clemens, Mich.	1- 5
2- 7	Post-Office, etc., Watertown, Wis.	1-12
2- 7	Courthouse, Griffin, Ga.	1-19
2- 8*	Building, Milledgeville, Ga	1-12
2- 9	Post office, Wabash, Ind.	1-26
2-14	Post office, etc., Barre, Vt.	1-19
2-15	Post office, etc., Brazil, Ind.	1-19
2-18*	Post office, North Yakima, Wash.	1-19
2-20	Post office, etc., Big Stone Gap, Va.	1-19
2-23	Erection of bldg, etc., Murphysboro, Ill.	1-19
2-26	School, Carcross, Yukon	1- 5
4-15	Plans, Havana, Cuba	10-20

Water-Works.

Bids close.		Noted in issue of
1-27*	Pumps and motors, Chicago, Ill.	1-19
1-28	Well, Fort George Wright, Wash.	1-19
1-30	Franchise, Los Angeles, Cal.	1-12
1-30	Pumping engine, Highland Park, Ill.	1-26
1-31	Well, State Center, Iowa	1-12
2- 1	Water pipe, sewer pipe, Souris, Man.	12- 1
2- 1	Water-works, Huron, S. Dak.	1-26
2- 1*	Pipe, Chicago, Ill.	1-26
2- 3	Water-works, Wooster, Ohio.	1-26
2- 4	Water mains, Troy, Ohio	1-26
2- 4	Water-works, Kingston, Ill.	1-26
2- 4	Water mains, Troy, Ohio	1-19
2- 6	Water-works, Rippey, Iowa	1- 5
2- 6*	Pumping plants, Winnipeg, Man.	1-12
2- 6	Pumping station, Hanover, Kan.	1-26
2- 9*	Meters, Kansas City, Mo.	1-26
2-13*	Well, South River, N. J.	1-19
2-14	Water system, Townsend, Mont.	1-26
2-14	Water purification works, Toledo, Ohio	1-19
2-14*	Water system, Townsend, Mont.	1-26
2-15	Pumps, etc., Roosevelt, Ariz.	1-26
2-16*	Enlarging reservoir, etc., Bozeman, Mont	1-26
2-17	Pumping station, North Bend, Neb.	1-26
2-24*	Earthwork, Belle Fourche, S. Dak.	12-29
3- 1	Water-works, Atlantic, Iowa	1- 5

Sewers.

Bids close.		Noted in issue of
1-26	Sewer, Fairview, Pa.	1-26
1-26	Sewers, Detroit, Mich.	1-26
1-27	Sewers, Lorain, Ohio	1-19
1-27	Sewer, Campaign, Ill.	1-19
1-27*	Sewer, Corpus Christe, Tex	1-12
1-27*	Sewer, Chicago, Ill.	1-19
1-28	Sewer, Alexandria, S. Dak.	1-12
1-28	Sewer, Syracuse, N. Y.	12-29
1-28	Sewer, Syracuse, N. Y.	1- 5
1-29	Sewer, Spokane, Wash.	1-12
1-30	Sewer, Sacramento, Cal.	1-26
1-30*	Sewers, Wyandotte, Mich.	1-26
2- 1	Sewer material, Cambridge, Mass.	1-26
2- 1	Sewer, La Grange, Ill.	1-26
2- 1	Sewerage disposal system, Baltimore, Md.	1-19
2- 3	Sewer, St. Louis, Mo.	1-26
2- 6	Sewers, Atlanta, Ga.	1-19
2- 7*	Sewers, Toronto, Ont	1-12
2- 7*	Sewers, Summit, N. J.	1-26
2- 8	Sewers, Garner, Iowa	1-26

Streets and Roads.

Bids close.		Noted in issue of
1-26	Paving, etc., Buffalo, N. Y.	1-26
1-26	Paving, Kansas City, Mo.	1-26
1-27	Paving, Cleveland, Ohio	1-12
1-27	Grading, etc., Newport, Tenn.	1-26
1-27	Paving, etc., Tulsa, Okla.	1-26
1-27	Street improvement, Moline, Ill.	1-26
1-28	Gravel road, Terre Haute, Ind.	1-26
1-30	Constructing walk, Appleton, Wis.	1-26
1-30	Grading, etc., Kenton, Ohio	1-26
1-30	Paving, etc., Grand Haven, Mich.	1-26
1-31	Grading, etc., Wenatchee, Wash.	1-26
2- 1	Curbing, etc., New York, N. Y.	1-26
2- 1	Paving, etc., New York, N. Y.	1-26
2- 1	Macadam road, Hancock, Mich.	1-26
2- 1	Paving, Cedar Rapids, Iowa	1-26
2- 1	Gravel road, Fowler, Ind.	1- 5
2- 2	Macadam road, Fort Wayne, Ind.	1-19
2- 3	Culverts, Cincinnati, Ohio	1-19
2- 3	Grading, etc., Indianapolis, Ind.	1-26
2- 3	Grading, etc., Cleveland, Ohio	1-26
2- 6	Paving, Buffalo, N. Y.	1-26
2- 6	Paving, Montgomery, Ala.	1-26
2- 6	Road Construction, Fowler, Ind.	1-26
2- 6	Street, Greensburg, Ind.	1-26
2- 6*	Paving, Huntington, W. Va.	1-19
2- 6	Sidewalks, etc., Atlanta, Ga.	1-19
2- 6	Gravel road, Huntington, Ind.	1-12
2- 7	Sidewalks, Palatka, Fla	1-12
2- 7	Paving, Newburgh, N. Y.	1-12
2- 7	Gravel road, Crawfordsville, Ind.	1-12
2- 7	Gravel road, Logansport, Ind.	1-19
2- 7	Macadam road, Marion, Ind.	1-19
2- 7	Gravel roads, Winamac, Ind.	1-19
2- 7	Road, Martinsville, Ind.	1-19
2- 7	Macadamizing, Bloomfield, Ind.	1-26
2- 7	Highway improvem't, Brazil, Ind.	1-26
2- 7	Sidewalks, Crowley, La.	1-26
2- 8	Road improvement, Cleveland, O.	1-19
2- 8	Gravel road, Mt. Vernon, Ind.	1-19
2- 8	Road construction, Cleveland, O.	1-19
2-11	Grading, Cleveland, Ohio	1-26
2-15	Road construction, Cleveland, O.	1-19
2-16	Paving, Mobile, Ala.	1-26
2-20	Roads, etc., Boston, Mass.	-26
2-23	Paving, Portland, Ore.	1-19
3- 1*	Asphalt, Winnipeg, Man.	1-26

Miscellaneous.

Bids close.		Noted in issue of
1-27	Life-saving station, Eagle Harbor, Mich.	12-29
1-27	Ditch, Cambridge, Minn.	1-19
1-27	Tile, Champaign, Ill.	1-26
1-27	Drain, Muskegon, Mich.	1-26
1-27	Removal of ashes (garbage), Boston, Mass.	1-26
1-28	Tile drains, Alexandria, S. Dak.	1-19
1-28	Ditch, Fort Wayne, Ind.	1-19
1-28	Lock-houses, Wheeling, W. [illegible]	1-19
1-30	Breakwater, Port Burwell, [illegible]	1- 5
1-30*	Telephone system, West P[illegible], N. Y.	1- 5
1-30	Drain, Shelbyville, Ind.	1-26
1-30	Hose, Mankato, Minn.	1-26
1-31	Dredging, New York, N. Y.	1-26
1-31	Shed, oil house, etc., New Y[illegible]	1-26
1-31	Brass and copper pipe, Washington, D. C.	1-26
1-31	Freight lift, Buffalo, N. Y.	1-19
1-31	Lumber, etc., Panama (U. S. Poss.)	1-26
2- 1*	Harbor Lines, New York	1-12
2- 1*	Cargo Handling Cranes, Panama (U. S. Poss.)	1-19
2- 1	Levee work, Greenville, Miss.	1-26
2- 2	Picket Fences, New York	1-26
2- 2	Timber, New York	1-26
2- 2	Dump picking (garbage), Cleveland, Ohio	1-26
2- 3*	Drainage work, Peoria, Ill.	1-19
2- 3*	Storage battery, Athenia, N. J.	1-19
2- 4	Ditches, Bemidji, Minn.	1-19
2- 4	Roof and runway, Norfolk, Va.	1-12
2- 4	Travelling crane, Norfolk, Va.	1-12
2- 4	Culverts, Warren, Minn.	1-26
2- 6	Torpedo boats, Washington, D. C.	12-15
2- 6	Chert and gravel, etc., Atlanta, Ga.	1-19
2- 6	Fire station, Fort Screven, Ga.	1-19
2- 6	Road roller, St. Paul, Minn.	1-26
2- 7*	Dams and canals, Porto Rico (U. S. Poss.)	12-22
2- 7	Revolver ranges, etc., Blauvelt, N. Y.	1-26
2- 7	Docks, Michigan City, Ind.	1-26
2- 7	Culverts, Dickinson, N. Dak.	1-26
2-9	Steel fences, Fort Meade, S. Dak.	1-19
2-10	Cold storage plant, Crisfield, Md.	1-26
2-11	Oil tanks, Portsmouth, N. H.	1-12
2-11*	Dredging, Galveston, Tex	1-12
2-13	Wharf, Michipicoten, Ont.	1-26
2-14*	Dredging and rock removal, New York	1-12
2-15	Steel steamer, Ottawa, Ont.	12-29
2-15	Boiler, Ottawa, Ont.	1-19
2-15	Fire engine and hose wagon, Washington, D. C.	1-19
2-18*	Storehouse, Fort H. G. Wright, N. Y.	1-26
2-20	Lock and dam, Cincinnati, Ohio	1-26
2-21*	Structural steel fabrication, New Orleans, La.	1-26
2-22	Steel tramway plates, Australia (Foreign)	12- 8
2-25	Machinery for gate valves, etc., Panama (U. S. Poss.)	1- 5
2-28	Elec. pumping machinery, Australia (Foreign)	12-29
3- 1	Bath house, Hot Springs, Ark	1-12
3- 1	Ventilating apparatus, So. Africa (Foreign)	1-19
3-14	Wireless telegraphy installation, Australia (Foreign)	1-19
3-16	Ditch, etc., Rector, Ark.	1-26
3-24*	Rock railway material, Panama, (U. S. Poss.)	1-26
3-30	Dams, etc., Panama (U. S. Poss)	1-19
4-20	Hospital, etc., (plans and designs) Argentine Republic (Foreign)	1-12

Examinations.

Examination date.		Noted in issue of
1-28	Asst. in tobacco investigations., Wash., D. C.	12-29
2- 3	Asst. engineer, New York, N. Y.	12-29
2- 3	Assistant engineer, New York, N. Y.	1- 5
2- 7	Assistant Classifier, Washington, D. C.	1- 5
2- 8	Assistant Physicist, Wash., D. C.	12-22
2- 8	Assistant Curator, Wash., D. C.	12-22
2- 8	Preparator., Division of Technology, Wash., D. C.	12-29
2- 8	Topographic Aaid, Washington, D. C.	12- 8
2- 8	Aid, Washington, D. C.	1-19
2- 8	Topographic Draftsman and copyist, topographic draftsman, Washington, D. C.	1-19
2- 9	Asst. Geologist, Wash., D. C.	[illegible]-8
2- 9	Junior Topographer, Wash., D. C.	12- 8
2-11	Assistant civil engineer, Albany, N. Y.	1-26
2-11	Accident Inspector, Albany, N. Y.	1-26
2-11	Leveler, Albany, N. Y.	1-26
2-11	Chief Inspector of Gas, Albany, N. Y.	1-26
2-23	Aid in Anthropology, Washington, D. C.	1-26

TERRA COT TILE WORK.—National Fire Proofing Pittsburg, Pa. Paper; 6¾ x 9¾ ins. pp. 30; illustrated; 10 cts.

This is the first number of a house-organ magazine … "Building Progress." It includes paper on the hollow tile floor construction … Peoples Gas Co. Building (Chicago), … Heidelberg Building (New York), and … construction for residences. There is … the commencement of a series of article … practical building construction.

FILING …INETS.—The Globe-Wernicke Co., …nnati, Ohio. Stiff paper; 8 × 10 ins.; pp. 32; illustrated.

This … is devoted to filing cabinets for let… pamphlets, periodicals, trade publica… and catalogs. It is remarkably w… …ustrated, and it is not unlikely that … engineer, who finds his filing and … …ing system an ever-constant proble… …ill obtain many helpful suggestions … …rely turning over the leaves and glancin… at the illustrations. The chief oversi… …eems to be that no clue is given as to … prices of the various files illustrated.

POW… TRANSMISSION MACHINERY.—H… …utch Co., Cleveland, Ohio. Catalog No. 9. Cloth; 6 × 9 ins.; pp. 194; illustrated.

Cou…gs, bearings and friction clutch for line sh…ting occupy the greater part of this catal… Flanged, clamp, jaw and cone couplin… are shown. The Hill collar-oiling bearing is featured in the pages devoted to beari… and shaft hangers. Some 40 pp. are devoted to the Hill friction clutch and its parts. Next come cast-iron pulleys, belt tighteners and rope drive machinery. Complete price lists are given and numerous tables of information as to horsepower transmitted by shafting, etc.

NOZZLES.—Joshua Hendy Iron Works, San Francisco, Cal. Paper; 7 × 10 ins.; pp. 21; illustrated.

The first three pages of this pamphlet form a brief abstract on the history of hydraulic gold mining in California. Mention is also made of other uses to which the hydraulic method of excavation has been put. Fourteen pages following describe nozzles made by this firm, which, although primarily intended for hydraulic mining, have been used for many purposes, and are also suggested for fire protection in forest reserves. The last six pages contain engineering data regarding hydraulic mining, such as the best methods of carrying on the excavation, sluicing the material, setting up the nozzles, laying pipe lines, etc. A table, giving the theoretical discharge of various sizes of nozzles under effective heads of from 5 to 2,000 ft. are included.

SAND DRYER.—Hyde Bros. & Co., Pittsburg, Pa. Folder; 5 × 8½ ins.; pp. 4; illustrated.

This folder describes the Steel City Sand Dryer. This dryer is built with an inner stove surrounded by a cast-iron grating, and the whole enclosed in a sheet-iron skirt or hopper. The grating serves to keep the wet sand from coming into direct contact with the heated stove. As soon as the sand dries it passes through the grating and through a 1½-in. space between the grating and the stove, and thence out at the bottom of the hopper. It is claimed that the grating permits the sand to dry more rapidly than when it is in contact with the stove. The grating also adds to the life of the stove by preventing the baking of the sand and the consequent burning out of the casting.

ELEVATOR TRUCKS.—The New York Revolving Portable Elevator Co., Jersey City, N. J. Paper; 3½ × 6 ins.; pp. 15; illustrated.

This little booklet describes an elevator truck or a portable elevator for use in handling boxes, bales, etc., in warehouses. These are called by their manufacturer "Revolvators." They are built of steel on a low truck with an upright guide to which is attached a movable platform or lift, which is operated by a crank and gears attached to the upright. They are made in lifts of from 6′ 4″ to 18′ 4″ from floor to top of movable platform. The use of these is claimed to increase the storage capacity of warehouses and reduce the labor and possibility of breakage in handling packages. It is claimed that one man can lift 1,500 lbs. by the use of this apparatus.

CONCRETE MIXERS.—Municipal Engineering & Contracting Co., Railway Exchange Building, Chicago. Paper; 9 × 6 ins.; pp. 60; illustrated.

The Chicago improved cube concrete mixer is of the revolving cubical box type, and the pamphlet sets forth the claims for the advantages of this type as compared with other types. The machine is shown in various forms, both stationary and portable, and driven either by belting or by steam or gasoline engines. Several of the portable plants have charging buckets, and some of them are fitted with a derrick boom for handling the concrete bucket or a horizontal boom for a dump bucket. This latter plan is intended particularly for distributing concrete on street work. One of the installations on the Panama Canal work is shown. There are some pages of information as to the proportioning of concrete mixtures.

CONVEYING MACHINERY. — Stephens-Adamson Mfg. Co., Aurora, Ill. Paper; 6 × 9 ins.; pp. 23; illustrated.

This is Bulletin No. 33 of a publication called the "Labor Saver" It contains several interesting descriptions of conveyor installations. These include an account of a coal washery at Tower Hill, Ill., a plant having a capacity of 500 tons per day of eight hours; an installation of a belt-conveyor for delivering building materials during construction; an account of the Cape Girardeau Portland Cement Co.'s plant at Cape Girardeau, Mo., and a description of a unique storage system for the plant of the American Carbolite Co., where all the material is handled by a system of belt-conveyors. Two pages are used to describe an automatic reversing tripper for use with belt-conveyors.

SURVEYING INSTRUMENTS.—W. & L. E. Gurley, Troy, N. Y. Cloth; 4¾ × 6¾ ins.; pp. 502; illustrated. Price, 50 cts.

This is the 45th edition of the famous Gurley Manual, perhaps as well known to engineers and surveyors as any other book on surveying. This new edition is in every way up to the standard long maintained by this firm. Many of the illustrations of instruments are printed in natural colors, which we believe is an innovation in this edition. In all, 263 pages of the book are devoted to descriptions of surveying instruments and their use and adjustment. The remainder of the book is a catalog and price list of the various instruments described, and of all kinds of civil engineers', surveyors' and draftsmans' supplies. The last 20 pages is devoted to standard books on engineering subjects and their list prices, any of which this firm is ready to supply.

MINE FANS.—The Jeffrey Mfg. Co., Columbus, Ohio. Stiff paper; 6 × 9 ins.; pp. 36; illustrated.

This catalog contains illustrated descriptions of some very large installations of Jeffrey fans, together with a good deal of useful information on ventilation generally. From pages 9 to 16 inclusive are formulas for the solution of ventilating problems, which will be found useful to mining engineers and mine operators. On pages 33 and 34 are tables for determining the theoretical or calculated water gage of fans of different peripheral speeds; for telling the approximate revolutions necessary to produce a given gage; sizes of fans and approximate revolutions necessary to deliver a certain volume of air.

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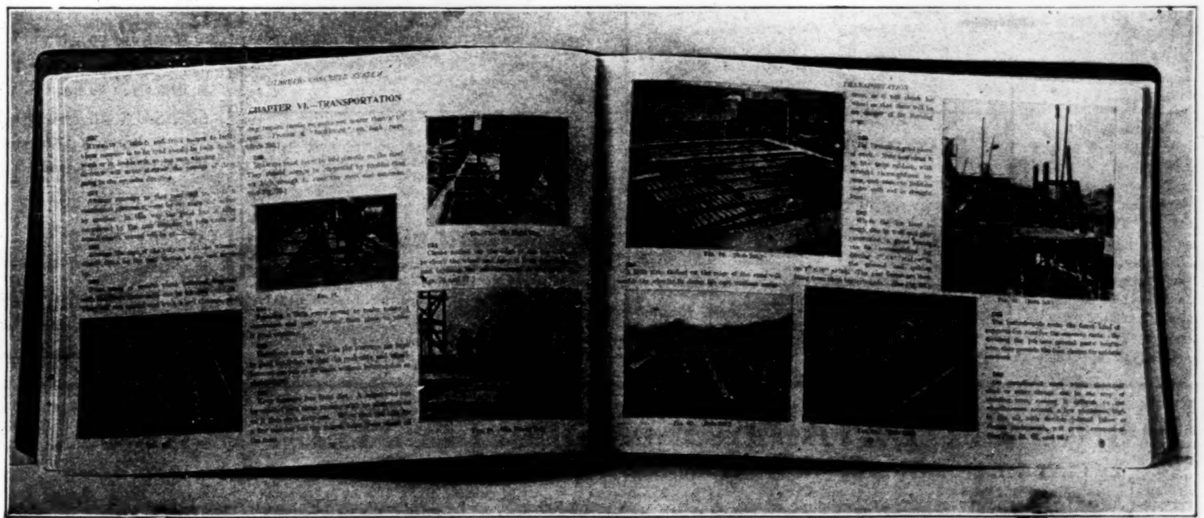

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PROPOSALS FOR RACK RAILWAY MATERIAL for the Panama Canal Locks, including Rack, Steel Crossties, Bolts and Nuts, Tie Clips, Washers, Steel Channels, Rail Bonds, Copper Conductor Rails, Steel Conductor Rails, Insulators, Bumpers, Frogs, Switches, etc.—Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 a. m., March 24, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 619) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 55 National Realty Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal., also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburg, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.—F. C. BOGGS, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

SEWER.

Summit, N. J.

Sealed proposals will be received by the Common Council of the City of Summit from 8 p. m. to 8.30 p. m., on Tuesday, February 7, 1911, for the construction of 4,960 lineal feet of 8 and 10-inch vitrified pipe sewer in Springfield Avenue and Tulip Street, and manholes, excavation, etc., necessary to same.

The plans and specifications of the work can be examined at the office of the City Engineer, in the City Hall, Summit.

Said proposals must be accompanied by a certified check or cash for five (5) per cent. of the total amount of bid. If certified check is furnished it shall be made payable to the City of Summit without reserve.

Surety bonds for the sum of $5,000 will be required of the successful bidder.

By direction of the Common Council of the City of Summit.

J. EDW. ROWE,
City Clerk.

JOHN S. STIGER, City Engineer.

ENLARGING RESERVOIR.

Bozeman, Mont.

Sealed proposals will be received at the office of the undersigned in the City of Bozeman, Montana, until 5 o'clock P. M. on the 16th day of February, 1911, for the excavation required to enlarge the reservoir of the Bozeman City Water Works, and increasing the size of the dam and banks with the excavated material, amounting to about 13,000 cubic yards in accordance with the specifications therefor on file at this office.

Blank "Proposals," copies of specifications and instructions to bidders may be obtained of the City Clerk or the City Engineer.

Each bid must be accompanied by a certified check for One Hundred Dollars ($100.00) upon some bank in Bozeman, Montana, payable to the Treasurer of said City, which check will be forfeited to the said City in case the successful bidder shall fail to furnish satisfactory bond and enter into the proposed contract within five (5) days from the date of notification of award.

The right is reserved to reject any and all bids.

A. M. BRANDENBURG,
City Clerk.

CONCRETE FOR RESERVOIR.

Bozeman, Mont.

Sealed proposals will be received at the office of the undersigned in the City of Bozeman, Montana, until 5 o'clock P. M. on the 16th day of February, 1911, for the laying of concrete on the sideslopes and bottom of the enlarged reservoir of the Bozeman City Water Works, amounting to about 4,840 square yards in accordance with the plans and specifications therefor on file at this office.

Blank "Proposals" copies of "Specifications" and "Instruction to Bidders" may be obtained of the City Clerk or the City Engineer.

Each bid must be accompanied by a certified check for Two Hundred Dollars ($200.00) upon some bank in Bozeman, Montana, payable to the Treasurer of said City, which check will be forfeited to the said City in case the successful bidder shall fail to furnish satisfactory bond and enter into the proposed contract within ten (10) days from the date of notification of award.

The City of Bozeman reserves the right to reject any and all bids.

A. M. BRANDENBURG,
City Clerk.

WATER SYSTEM.

Townsend, Mont.

The town of Townsend, Mont., will open bids on Feb. 14 next for the construction of a water system. This is to be a pumping station.

E. H. GOODMAN,
Clerk.

Situations Wanted

INSTRUMENTMAN, five years on railroad, water, sewer and drainage work, desires position; location, immaterial. Address "K. A. 1," Engineering News, New York. 4-6t

EXPERIENCED instrumentman desires position in or about New York. Address "C. B. 4," Engineering News, New York. 4-2t

STRUCTURAL Draftsman, detailing or checking, 9 years' experience; technical graduate. Address "L. A. 3," Engineering News, New York. 4-1t

DRAFTSMAN, 5 years' experience detail structural; also stenographer and typewriter; 29; married; $20. Address "O. B. 4," Engineering News, New York. 4-1t

FIRST-CLASS structural checker, thoroughly experienced on mill building and apartment house construction, desires position. Address "S. B. 4," Engineering News, New York. 4-4t

DRAFTSMAN, estimator and computer, 5 years' experience in general contracting and reinforced-concrete construction, desires position with reliable engineering concern. Address "F. B. 3," Engineering News, New York. 4-1t

DRAFTSMAN—First-class centrifugal pump draftsman having shop experience, desires position with reliable concern. Address "H. B. 4," Engineering News, New York. 4-1t

STRUCTURAL draftsman and checker, technical education; thoroughly competent; salary $25.00; location New York. Address "F. B. 4," Engineering News, New York. 4-1t

DRAFTSMAN, mechanical, 8 years' experience, desires position with manufacturing concern offering chances for advancement. Address "G. B. 4," Engineering News, New York. 4-1t

SUPERINTENDENT (36), practical, experienced in all kinds of construction work, including concrete; competent to organize and handle a large force of men. Address "G. 3," Engineering News, New York. 4-3t

Situations Open

COMPANY installing complete water supplies for country houses requires young man (preferably unmarried) to supervise scattered work in neighborhood of New York. Must have knowledge of pumps, gasoline engines, shafting, piping, concrete work, etc. Permanent position for right man. Address "W. B. 4," Engineering News, New York. 4-1t

WANTED—Draftsman, experienced in freight car work. Apply MAGOR CAR CO., Passaic, N. J., stating experience, salary expected, etc. 4-3t

WANTED—By structural steel company in New York City, first-class detailers and checkers; write, giving age, education, nationality, salary and references. Address "D. B. 4," Engineering News, New York. 4-4t

WANTED—Draftsman, experienced in designing and detailing standpipes, water towers and plate steel construction. Address "L. C. 4," Engineering News, New York. 4-1t

Miscellaneous Wants

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TABLE OF CONTENTS.—CHAPTER I.—RIVETING.—Dimensions of Rivets. Rivet Holes, Driving Rivets, Theory of Riveting, Requirements for a good Riveted Joint, Proper Sizes of Rivets, Spacing of Rivets, Kinds of Joints, Design of Riveted Connections, Example of Riveted Joints, Net-sections of Tension Members, Eccentric Stresses in Riveted Connections, Showing Rivets on Drawings. CHAPTER II.—DESIGNING AND ESTIMATING.—Kinds of Structural Steel Work, Kinds of Shops, Proposals and Contracts, Designs and Estimates, Time Savers, Order of Estimating, Specifications, Stress Sheets and General Plans. CHAPTER III.—MANUFACTURE AND ERECTION.—Shop Operations, Erection, Drafting Department, A Draftsman's Equipment, Ordering Materials, Shop Drawings, Order of Procedure for a Pin-Connected Bridge, Order of Procedure for Plate Girder Bridge, Shop Bills, Shipment, Materials, Inspection. CHAPTER IV.—ROOFS.—Construction, Roof Coverings, Types of Trusses, Building Construction, Loads, Stresses, The Design of a Roof, The Detail Drawings. CHAPTER V.—PLATE GIRDER BRIDGES.—Construction and Uses, Stresses in Girders, The Web, The Flanges, Economic Depth, Stiffeners, Web Splices, Flange Riveting, Flange Splices, Design of a Stringer, Design of a Deck Plate Girder Bridge, Through Plate Girders. CHAPTER VI.—PIN-CONNECTED BRIDGES.—Construction, Types of Trusses, Loads, Tension Members, Compression Members, Lateral Systems, Design of a Pin-Connected Railway Bridge, Dead Load, The Depth, Stresses, Design of Tension Members, Design of Compression Members, Design of the End Posts, The Portal Bracing, Design of Floor Beams, Top Lateral Bracing, Bottom Lateral Bracing, Shoes and Rollers, Estimates and Stress Sheet. CHAPTER VII.—DETAILS OF PIN-CONNECTED BRIDGES.—Pins, Calculation of Pins, Details of a Riveted Tension Member, Location of Pins in Top Chord and End Post, Lacing and Compression Members, Details of the Floor Beams.

The object sought in this book is to collect from the many larger and more exhaustive works on structural steel design, those parts which are applicable to simple structures, and which can be taken up in technical schools in the limited time usually allotted to the subject; and at the same time, to show by general cases and specific examples how the simple laws of statics may be applied to the details of steel structures with the object of producing details which are in accord with the stresses they have to transmit.

It is presumed that the student has already finished a course in stresses, and little time is given here to the methods of calculating the primary stresses in structures.

By the illustrations given and the methods employed, the reasons will be made apparent for many of the details commonly employed in structural work, and which are many times put in by "rule of thumb," often without due consideration of the stresses they have to carry.

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